



THE GOVERNOR'S CALIFORNIA  
**INTERAGENCY COUNCIL**  
**ON VETERANS** ★ ★ ★

**White Paper: Home Modification Fund Allocation  
for Underserved Veterans with Service-Connected  
Disabilities in California**

Prepared by the Governor's California Interagency Council on Veterans Housing Workgroup  
Affordable Homeownership Sub-workgroup

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## ACKNOWLEDGEMENTS

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The California Interagency Council on Veterans (ICV) was created by Governor Edmund J. Brown, Jr. “to identify and prioritize the needs of California’s veterans, and to coordinate the activities at all levels of government in addressing those needs.” ICV Members include the Secretaries of: Department of Veterans Affairs & ICV Chair; Labor and Workforce Development Agency; California Volunteers; Business, Consumer Services, & Housing Agency; Health and Human Services Agency; Department of Corrections and Rehabilitation; Adjutant General of the Military Department; and the Directors of: Employment Development Department; Department of Consumer Affairs; and Department of Rehabilitation; and a representative from each the California Senate, the California Assembly, the Chief Justice Office, the Office of University of California President, the Office of the California State University President, and the California Community College Chancellors Office.

Within the ICV, the Housing Workgroup’s mission is to identify and prioritize the housing needs of California’s veterans, and to coordinate the activities at all levels of government in addressing those needs. The ICV Housing workgroup leadership would like to acknowledge the profound vision in creating the ICV, which led to five-year effort to develop meaningful partnerships at all levels of government as well as public-private coordination efforts on behalf of veterans. This effort promoted the critical linkages between veteran’s health, wellbeing, education, work and housing needs.

In leading that effort, we would like to thank the Housing Workgroup Co-Chairs Donna Deutchman and Theresa Gunn and ICV Administrative Officer, Pamela Rasada. Additionally, we acknowledge the incredible commitment of time, talent, and dedication of the California Department of Veteran Affairs, Retired Secretary Peter Gravett, current Secretary Vito Imbasciani, M.D. and the staff of the Department of Farm and Home Loans, led by Deputy Secretary Theresa Gunn. We equally acknowledge the investment of time and expertise of the leadership and staff of the California Department of Housing and Community Development, under the leadership of Ben Metcalf and the California Housing and Finance Agency, under the leadership of Tia Boatman Patterson.

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Review of drafts and final approval included the Primary Housing Group Participants including the aforementioned participants and representatives from: American Legion – California, AMVets, California Veterans Assistance Foundation, Chelsea Investment Corp., Community Housing Works, Corporation for Supportive Housing, EnviroBoard, Habitat for Humanity San Fernando/Santa Clarita Valleys, Home Base, Housing California, Merritt Community Capital, Military Connection.com, Mothers for Military Accountability, National Education Advocacy and Training, New Directions, People Assisting The Homeless, Sacramento Steps Forward, Salvation Army, SAMHSA SOAR TA Center, Shelter Partnership, The Sanctuary Project Veterans, The Veterans Project Organization, United Way Los Angeles, United States Veteran Initiative , Veterans Net, Victory Village, Volunteers of America and Zweifel and Associates.

When presented with the concept for this paper at the 2014 ICV Member convening the ICV Members discussed the concept in depth and provided considerable input and recommendations. It is our goal that they will find the content of the resulting white paper beneficial as they consider public policy options for filling this gap in veteran services.

## Introduction

The purpose of this paper is to document the home modification needs of disabled and elderly veterans and the need for funding subsidies to meet their needs. Home modifications for individuals experiencing challenges related to PTSD, TBI, MST and chronic pain have been found to improve behavioral health and wellness, assist with family reunification, and reduce the incidence of homelessness.<sup>1</sup> As will be shown, home modifications may reduce the societal costs of healthcare and social support while improving the quality of life for California's veterans. Disability research indicates that treatments which avoid unnecessary dependence and excess disability enhance rehabilitation and mental health outcomes among the recently disabled.<sup>2</sup>

Through their work seeking affordable home ownership opportunities for veterans, the Interagency Council on Veterans Affordable Homeownership Sub-workgroup (SWG) identified this need. The SWG hosted an Exploratory Discussion with agency staff and advocates to discuss the issue. The attendees requested the creation of a white paper to define the scope of the issue for policymakers.

This white paper includes the following information: The number of California veterans potentially requiring home modifications and an overview of their symptoms which may be relieved by home modification. We have also included a general review of the types and costs of the most prevalent of home modifications currently in use as well as a cost-benefit review detailing their fiscal implications. Finally, a list of currently available funding streams at the federal and state levels is included, as well as a section detailing policy options for decision makers and an appendix listing recommended home modifications for specified conditions.

## California Veterans and Home Modifications

### The Need

According to the California Research Bureau in Sacramento, as of 2013 there were 1.9 million veterans in California, with approximately 26.2 percent reporting having a disability.<sup>3</sup> A study published in the Journal of Head Trauma Rehabilitation conducted with over 11,000 veterans found that "veterans' employment status was influenced by the severity of their deployment-related TBI. About 45 percent of those with moderate or severe TBI were unemployed, compared to about one-third of those with mild TBI or no TBI history." Furthermore, chronic pain associated with TBI and PTSD has the potential to interfere with nearly every aspect of one's daily life, including employment, relationships, concentration, emotions, and overall well-being.<sup>4</sup>

According to statistics by the United States Department of Veterans Affairs' Office of Policy and Planning, there are approximately 74,716 veterans residing in California receiving benefits for service-connected PTSD and 9,675 for service-connected TBI. According to a report by the Housing Assistance Council, approximately 79.8% of veterans nationally are homeowners.<sup>5</sup>

Consider the following statistics:

- Noise-induced hearing loss is among the top disabilities associated with current conflicts (OEF/OIF veterans); seven out of ten injuries in Theater are due to blasts with an estimated 50 percent of those exposed to the blast experiencing permanent hearing loss<sup>6</sup>;
- Nearly 30 percent of OEF/OIF veterans treated at VA hospitals have been diagnosed with PTSD<sup>7</sup>;
- According to the Defense and Veterans Brain Injury Center as many as two-thirds of soldiers that have been taken to Walter Reed Army Medical Center since 2003 have suffered traumatic brain injuries<sup>8</sup>;
- Data from the VA's national screening program reveals that 1 in 4 military women has been sexually assaulted and up to 80% have been sexually harassed. The Pentagon has estimated that 26,000 male service members experienced unwanted sexual contact in 2012, up from 19,000 in 2010. Sexual assault is more likely to result in symptoms of posttraumatic stress disorder (PTSD) than are most other types of trauma, including combat.<sup>9</sup>
- Almost 60 percent of returning veterans from the Middle East and more than 50 percent of older Veterans in the VA health care system live with some form of chronic pain<sup>10</sup> and research is indicating that injuries to limbs, migraine headaches or any other condition that carries with it chronic pain all increase a veteran's risk of suicide.<sup>11</sup>

Traumatic Brain Injury (TBI), also referred to as the "Signature Wound" of war, is caused by a variety of explosions such as road side bombs and improvised explosive devices (IEDs) and has become one of the most common combat wounds suffered in Iraq and Afghanistan. The effect of traumatic brain injury is still poorly understood<sup>12</sup>, yet there are common symptoms of TBI which left untreated are predictive of long term institutionalization, homelessness or worse.<sup>13</sup> While TBI is called the "signature wound" of post 9/11 wars, PTSD and MST have been coined the "invisible wounds" of war. Unlike the physical wounds of war, these mental health conditions are often invisible to the eye and may affect mood, thoughts, and behavior.<sup>14,15</sup>

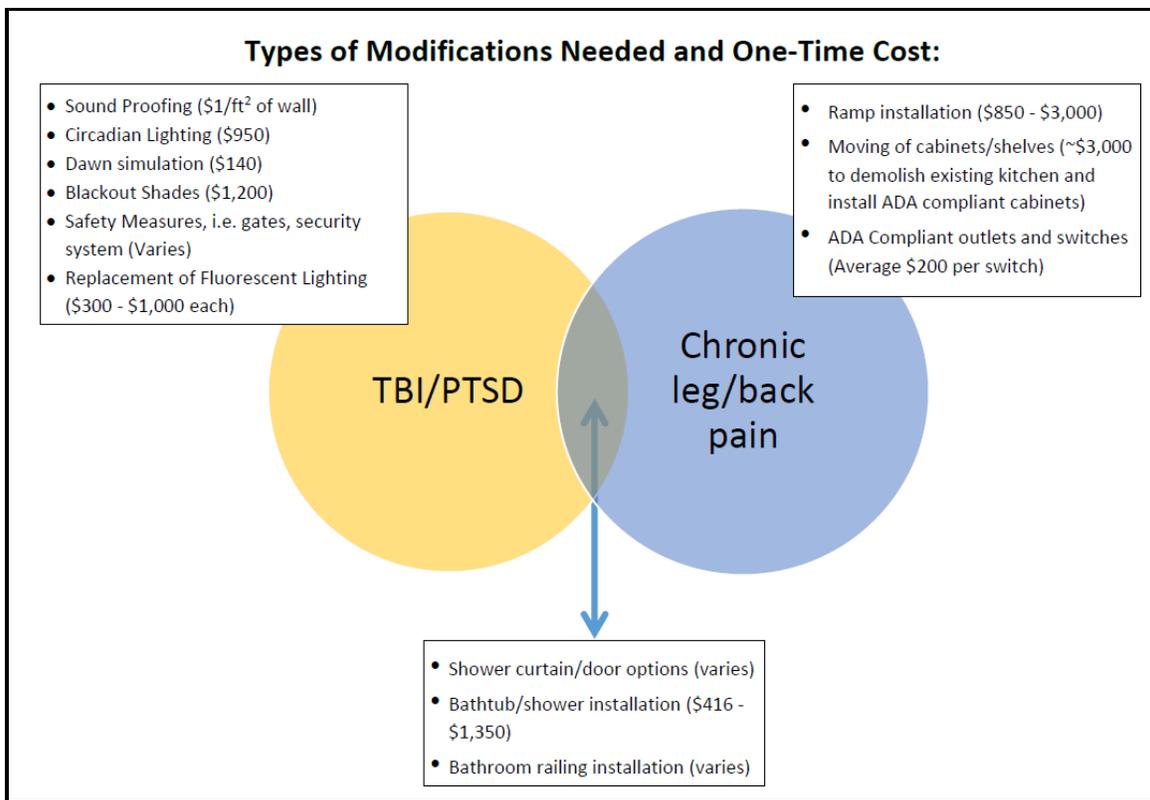
There are some behavioral and physical similarities between people who suffer from PTSD and TBI, and those who have other processing deficits, such as Autism-Spectrum Disorders (ASD). Some characteristics of those who have ASD include that they: prefer to be alone, have extreme phobias, have verbal outbursts, are sensitive to sounds, textures, tastes, smells, or light, have difficulty with loud or sudden sounds, may need to be left alone to release tension and frustration, suffer from seizure activity, and have irregular sleep patterns.<sup>16,17</sup>

Chronic, debilitating pain, especially leg and back pain, affect millions of veterans. Many times injuries suffered in training or during deployment may result in chronic pain as the veteran ages. Ameliorating this pain and preventing future excess or increased disability may reduce future reliance on health systems.<sup>18</sup>

The United States Department of Veterans Affairs (VA) Suicide Data Report, 2012 states that seven out of ten veterans who committed suicide were over the age of 50 and that 78 percent of them were patients of the VA Health System. Dr. Craig Bryan, a clinical psychologist and executive director of the University of Utah's National Center for Veterans Studies speculates that this population is at higher risk for suicide due to a disability which may include chronic pain and depression.<sup>19</sup>

While physically intact, there is a significant population of veterans suffering from “invisible wounds of war” that range from cognitive to chronic pain disorders. Assisting them in mitigating the adverse impacts of their conditions through the provision of a safe and appropriate environment enhances the ability of disabled and elderly veterans to experience positive life outcomes, reintegrate into society, and experience success in the workforce.

### Potential Types of Home Modifications Needed



There is a myriad of evidence on the effectiveness of home modifications as a treatment strategy for symptoms that are both a result of and which exacerbate cognitive and psychological illnesses. This is particularly true with anxiety, physical and neurological disorders, which are similar in nature to PTSD, TBI, and MST, that impact sensory integration, and other sensory issues. Anxiety and other issues that impact depression and negatively influence reintegration are highly susceptible to environmental challenges, including but not limited to sensory issues such as lighting, noise, etc. The ability to maximize independence while reducing risk and injury in the home environment are related to enhanced mental health

outcomes. These factors influence the ability for veterans with TBI, severe depression, and anxiety to self-manage or be managed within the home environment.<sup>20, 21, 22, 23, 24,25, 26</sup>

PTSD and TBI have well-defined symptoms that mirror other nervous system and/or neurological diseases. Symptom management and amelioration have been shown to assist in the reduction of negative long-term outcomes in these other diseases. Home modifications proven to address these symptoms in other populations are warranted since the modifications are symptom specific and address management and independent functioning rather than the disease state.

<b>Conditions and Associated Symptoms Relieved by Home Modifications</b>			
<b>PTSD</b>	<b>TBI</b>	<b>MST</b>	<b>CHRONIC BACK &amp; LEG PAIN</b>
<ul style="list-style-type: none"> <li>• Recurrent, unwanted, distressing memories</li> <li>• Reliving traumatic events (flashbacks)</li> <li>• Depression</li> <li>• Avoidance of conversation and activities that one sees as stressful</li> <li>• Feeling emotionally numb</li> <li>• Feeling jumpy or easily startled</li> <li>• Prone to angry outbursts</li> <li>• Hyper-vigilantism</li> <li>• Difficulty concentrating</li> <li>• Insomnia</li> </ul>	<p>Includes all PTSD symptoms, and additionally:</p> <ul style="list-style-type: none"> <li>• Memory loss</li> <li>• Seizures / Persistent headaches</li> <li>• Inappropriate sexual behavior</li> <li>• Impaired social skills</li> <li>• Inability to recognize or accept limitations</li> <li>• Impaired judgement and reasoning</li> <li>• Loss of Coordination and mobility</li> <li>• Slurred speech</li> </ul>	<ul style="list-style-type: none"> <li>• Depression</li> <li>• Trouble sleeping/ Nightmares</li> <li>• Trouble with attention, concentration, and memory</li> <li>• Alcohol/Drug abuse</li> <li>• Physical health problems</li> <li>• Chronic pain</li> <li>• Weight or eating problems</li> <li>• Stomach and/or bowel problems</li> </ul>	<p><i>Pain/discomfort when:</i></p> <ul style="list-style-type: none"> <li>• <i>Getting out of bed</i></li> <li>• <i>Bending/ Stooping</i></li> <li>• <i>Reaching high</i></li> <li>• <i>Climbing or descending stairs</i></li> <li>• <i>Walking</i></li> <li>• <i>Exercising</i></li> <li>• <i>Standing/sitting for long periods of time</i></li> <li>• <i>Depression</i></li> <li>• <i>Insomnia</i></li> </ul>

In considering needs and identifying likely outcomes for home modifications, the critical factor is whether or not such modifications will have an impact on the individuals' ability to perform activities of daily living (ADL). Enhanced ability to perform ADLs reduces the need for assistance and slows long-term deterioration or exacerbation of symptoms that lead to increased treatment needs and costs. For this reason, it is important to address symptoms of each disorder.<sup>27</sup>

According to the Substance Abuse and Mental Health Services Administration<sup>28</sup>, evidence indicates that Service Members, Veterans, and their Families (SMVF) face risks of losing their housing as a result of economic challenges and/or disabling conditions, especially behavioral health issues. SAMHSA states that stable housing provides the foundation upon which veterans

can pursue recovery and demonstrate resilience. Overtime, the progression of unmanageable living equates to the home becoming a hostile versus safe environment leading to instability and susceptibility to homelessness and/or the appearance of suicidal behavior. Stable housing can be achieved through appropriate home modifications.<sup>29,30</sup>

With regard to chronic pain, the average veteran when in training or deployed, has a history of carrying in excess of 100 pounds of gear daily for months at a time. This in turn becomes a major cause of joint and nerve pain, especially in the legs, neck and back. These injuries can be intensified by daily activities such as: climbing up and walking down stairs; having to stoop or reach up high; or having to constantly walk on unyielding surfaces. These injuries can also result in bone spurs and degenerative arthritis. Untreated, the pains from these injuries lead many veterans down the path of self-medication, abuse of pain killers, depression, and suicide.<sup>31,32</sup>

The California Research Bureau estimates almost one million Veterans living in California are over the age of 60 (52.3 percent of Veterans population).<sup>33</sup> Research on the aging process reveals that in the year 2000, seniors above 65 years experienced 1.8 million falls resulting in emergency room visits costing \$16.4 billion in medical and long term care costs. About 55% of these falls occurred inside the house. Some experts believe that falling could be reduced by environmental modification-for example reducing cluttered pathways, modifying slippery surfaces like showers, installation of grab bars, ramps, and handrails.<sup>34</sup>

In the Appendix to this paper is a sampling of home modifications proven to provide relief from symptoms related to TBI, PTSD, MST and chronic pain.

## **Cost/Benefit Analysis**

There were no specific studies found to quantify the cost-benefit analysis of the disabled veterans with cognitive, psychological and/or chronic pain disorders who would benefit from home modifications. However, there is ample research indicating social and economic costs/benefits and extrapolation is possible based on symptom specific modifications.

RAND Corporation, Center for Military Health Policy Research<sup>35</sup> reveals that the prevalence of cognitive disabilities will likely remain high unless systems of care for these individuals are enhanced. The unmet needs of such veterans can exacerbate illnesses, thus increasing medical costs and/or stress to caregivers and family members. The presence of such illnesses can:

- Impair relationships with family, spouses, children, and friends. The effects that a strained relationship has between the veteran and their children can extend the consequences of combat experiences across generations.
- Increase the risk of depression and suicide
- Decrease work productivity. The inability to perform at a job can damage future employment opportunities.

The RAND report estimated the two-year United States Veterans Affairs Medical Center costs for treating PTSD and major depression after deployment, ranges from \$5,960 to \$25,760 per

case. The cost of TBI is significantly higher with estimates of the one-year cost for treating mild TBI ranging from \$27,260 to \$32,760 per case and moderate to severe TBI ranging between \$268,9000 and \$408,520 per case . It should be noted that treatment of these conditions in private sector or public hospitals has not been estimated.

Reducing these costs can be directly related to the degree of symptoms experienced and the locations where the clients can be managed. According to *The Costs of Traumatic Brain Injury*, a literature review examining 108 studies comparing rehabilitation and outpatient costs in the community to long term care costs- “the potential cost savings both to the individual and/or society as a whole through successful TBI rehabilitation programs is substantial.”<sup>36</sup> As demonstrated by the above figures, home modifications designed to reduce symptoms associated with these conditions and make outpatient clients manageable in their homes may result in the reduction of long-term health care costs.

## Currently Available Funding

**Federal Programs:** USDVA administers three home modification grants for disabled Veterans yet veterans with chronic pain, impaired use of limbs or back, and cognitive or psychological disabilities who do not also experience one or more specified physical impairments are not eligible.<sup>37</sup> The Specially Adapted Housing (SAH) Grant which allows up to \$70,465, the Special Housing Adaptation (SHA) Grant, which allows up to \$14,093, and the Home Modification Improvements and Structural Alterations (HISA) grant, which allows up to \$6,800 or \$2,000 to veterans with service and non-service connected disabilities, respectively. The eligibility requirements for both SAH and SHA grants include: loss of or loss of use to arms and/or legs, severe burns, blindness, or respiratory injuries. While the HISA grant doesn’t necessarily exclude home modifications for veterans with cognitive disabilities, it is only awarded in conjunction with either the SAH or SHA grant.

There is limited financial assistance for qualifying seniors for home modifications through Older Americans Act funding; however, the funding is minimal and does not set aside an allocation for veterans.<sup>38</sup>

**State Programs:** The National Conference of State Legislatures (NCSL) provided the following information on states which have enacted home modification programs for veterans suffering from disabilities such as PTSD/TBI. The research revealed three categories of states with home modification programs: states with veteran-specific laws, states with non-veteran specific laws, and states with programs which do not support home modification.<sup>39</sup>

### **States with Veterans Specific Home Modification Laws:**<sup>40</sup>

- **Massachusetts (SB 2052** enacted April 2014) requires the State Secretary of Health and Human services to establish a Veterans’ home modification program for those who have suffered a service-connected disability and require home modification to function more independently in their home and community.

- **Delaware Veterans Trust Fund (Del. Code Ann.tit.29, Section #8721)**, created in 2013, provides financial assistance to Veterans to cover costs associated with “home repairs and safety modifications,” among the things.
- **New York (N.Y. Real Property Tax Law section 458)** provides a tax exemption for seriously disabled Veterans who take advantage of Federal assistance to modify a home with special features or facilities.
- **Oklahoma** enacted legislation similar to New York in 2013 – **SB 1723** and legislation is pending in a number of States.
- **New Jersey (AB 2187/SB 1543)** has a pending legislation known as “The Housing Assistance for Veterans Act.” The bill would create a five-year pilot program to assist disabled and low income veterans with housing modifications and rehabilitation needs.

### States with Non-veteran Specific Laws:

At the time of reporting, 22 states had created a TBI Trust Fund through legislation to assist individuals and families coping with brain injuries. Seven of these states, (Colorado, Florida, Georgia, Massachusetts, Mississippi, New Jersey, and New Mexico) have dedicated trust fund money to make home accessibility modifications for those with TBI. California is one of the 15 states with a TBI Trust Fund that does not use the funding to subsidize home modifications.<sup>41</sup>

## Policy Options

### Potential Funding and Policy Options

- **Federal Rule Changes:** The USDVA has a home modification subsidy available, yet veterans with chronic pain, impaired use of limbs or back, and cognitive or psychological disabilities who do not also experience one or more specified physical impairments are not eligible. A broader program for subsidizing home modifications that ameliorate and prevent certain effects of service connected disabilities can decrease public funding needs for long term care and homelessness while improving the quality of life for a broader cohort of California’s veteran population.
- **State Options:** To ensure veterans who are non-homeowners also have access to appropriate housing, explore current funding streams to identify options for implementing a set aside to support bonus points for VHHP applicants who incorporate therapeutic modifications into their development plans, or a special pilot grant.

The California Department of Veterans Affairs or the California Department of Housing and Community Development could choose to support legislation implementing a Veterans Home Modification subsidy, with annual appropriations, to assist Veterans with cognitive disabilities such as TBI, PTSD, and MST. The California Veterans Code Rewrite: This is a potential avenue for adding a home modification program for the cognitively disabled Veterans.

Encourage developers focused on the creation of affordable home ownership and rental opportunities options for Veteran to design homes with certain categories of disability specifications or modifications in mind. The California Department of Veterans Affairs

Residential Enriched Neighborhood (REN) is an example of a program which provides specific home modifications such as LED lighting versus fluorescent, grab rails in bath/shower, adjustment to counter tops, etc.

- **Private Donors:** A donation fund could be created to support a home modification program for Veterans with cognitive disabilities. This funding could also be used for Veterans who do not qualify for Federal/State benefits. Furthermore, this may provide an opportunity for a public/private partnership between entities such as The Home Depot Foundation's (HDF-VHGP) Veteran Housing Grants Program which awards grants to nonprofit organizations for the development and repair of veterans housing. To date, the HDF-VHGP has awarded over \$80 million, impacting 17,000+ veteran housing units.

## Conclusion

There are no publicly funded programs available to subsidize home modifications for California disabled and elderly veterans impacted by cognitive disorders who are ineligible for USDVA grant programs. California has 1.9 million veterans of which 26.2%, or approximately 500,000 report being disabled. Statistics by the United States Department of Veterans Affairs (USDVA) approximate that 74,716 veterans in California receive benefits for service-connected PTSD and 9,675 for TBI. Over one million veterans in California are over the age of 60.

The unmet needs of disabled veterans can increase medical costs, impair family relationships, lead to homelessness, depression, increased risk for suicide, and decreased work productivity. The costs of treating PTSD and TBI are high yet severity of symptoms and subsequent need for expensive interventions have been shown to be substantially reduced through home modifications. It was reported that roughly 79.8% of veterans nationally are homeowners.

Home modifications serve to enhance life outcomes, mitigate suicide risk, increase work productivity, and reduce costs to programs providing services to veterans with PTSD, TBI, MST and chronic leg and back pain, including the USDVA Health System.

Providing a subsidy to support home modification for all California Veterans who are elderly and/or who have service related disabilities, be it through state appropriation or a reevaluation of USDVA eligibility criteria for home modification grants, could lead to an enhanced potential for strong life outcomes, increased productivity, and a reduction of overall health care costs.

## APPENDIX

### SAMPLE 1

In Making Homes that Work<sup>42</sup> the following home modifications are recommended:

#### **Issues: Defensiveness, claustrophobia, sensory overload**

“Often there is a need to reorganize the bathroom or appropriate adjacent square footage so the bathroom can be transformed to address tactile defensiveness, claustrophobia or sensory overload.”

#### **Recommended Modifications:**

- Install non-skid flooring
- Install weight-bearing bars with solid backing. Standard installations don’t anticipate the forces that can be applied when a person stands or stays seated with every use.
- Install a floor drain so any splashed water can drain away rather than present a fall hazard.
- Operable windows and natural light- by finding ways to include natural light and ventilation, the bathroom becomes a more open and welcoming place.

### SAMPLE 2

#### **Issue: Stress Relief**

“...a walking loop can give an individual more control over social interactions. The loop makes it easy for them to enter a room, stay, leave or return later on their own terms. To support this kind of control and interaction, try to connect private spaces such as bedrooms and sitting rooms to more public spaces such as living, dining, entry or kitchens.”

#### **Recommended Modifications:**

- Open walls and create passageways that can be navigated openly.
- Make loops that can connect people to outside areas

### SAMPLE 3

#### **Issue: Creating Safe Places**

“Create private places that make the person feel safe and in control. Having the opportunity to retreat, when needed, often results in the person regaining control and being better able to choose more, not less, social interaction.”

### **Recommended Modifications:**

- Provide the person with as much control as possible in their bedroom, such as: control of the door, light, air, and sounds, and choice of colors
- Eliminate fear triggers. For example, add lights in dark hallways, add soundproofing or sound absorbent materials, listen for and mitigate household noises from appliances and equipment that may be frightening

### **SAMPLE 4**

#### **Issue: Reducing Chaos**

“Chaos can lead to frustration for the individual, sometimes manifesting itself as aggression or property damage.”

### **Recommended Modifications:**

- Adequate storage
- Avoid bad smells by limiting carpeting

### **SAMPLE 5**

#### **Issue: Vision Anomalies**

In terms of vision anomalies, one symptom evident in those with TBI is photosensitivity, or photophobia, which presents as an elevated sensitivity to light in the absence of ocular inflammation or infection. Photosensitivity in those with TBI has been reported in between 20-40% in non-selected (i.e., not necessarily visually-symptomatic persons with TBI) samples] and up to nearly 50% in selected (i.e., visually-symptomatic persons with TBI). The type of photosensitivity may be: 1) generalized to all types of lighting, or 2) selective to fluorescent lighting.

Those with TBI who present with selective photosensitivity to fluorescent lighting, present often with visual-vestibular symptoms. They may report the following symptoms when functioning in spaces illuminated with fluorescent lighting:

- fatigue with:
  - higher level cognitive tasks, including multi-tasking
  - physical activity
- eyestrain and eye fatigue
- headache, which may or may not be migrainous
- malaise
- nausea
- disequilibrium, dizziness, and possible vertigo
- increased sensitivity to motion of visual stimuli<sup>16</sup>

Similar to those who suffer from PTSD and TBI, people with processing disorders also experience sensitivity to bright and/or flickering lights. According to Jason Hoffrogge at Pathfinders <sup>17</sup>, “people with autism, ADHD, and similar [processing] disorders tend to be bothered by fluorescent lights. They often tend to be too bright. They also flicker with 60-cycle electricity, which can be distracting or annoying... it is also beneficial to have dimmer switches for the lights so that you can control the brightness of the room.”

### **Recommended Modifications:**

- Replace fluorescent lighting with incandescent lights
- Use dimmer switches for lights to control brightness

## **SAMPLE 6**

### **Issue: Seizures, Fainting, Blackouts**

One major side effect of both PTSD and TBI is the increased potential of seizures, fainting, and blackouts. “Physical Modifications to the Home” recommended for seniors by Navigating the Aging Process recommends modifications to homes occupied by seniors who are prone to similar incidents. The journal states that “falls are caused by dizziness, fainting, seizure, impairment of motion, lack of strength, lack of strength of arm or leg, gait impairment, arthritis, vitamin deficiencies, bad vision, poor balance, and the failure to use appropriate assistive devices such as walkers and canes.”<sup>18</sup> For these side effects, the following modifications to home bathrooms are recommended:

### **Recommended Modifications**

- Wall support and provision for adjustable and/or varied height counters and removable base cabinets
- Bracing in walls around tub, shower, shower seat, and toilet for installation of grab bars to support 250-300 pounds
- If stand-up shower is used in main bath, it is curbless and minimum of 36 inches wide
- Bathtub- lower for easier access
- Fold down seat in shower
- Adjustable/handheld showerheads, 6 foot hose
- Toilet 2 ½ inches higher than standard toilet or height-adjustable
- Slip-resistant flooring in bathroom and shower

Furthermore, The Epilepsy Foundation (C. S. Schachter 2013) <sup>19</sup> recommends the following bathroom modifications for individuals who are susceptible to seizure activity:

- Hang the bathroom door so that it swings outward. This prevents the door from being blocked if a person falls during a seizure
- Take showers instead of baths

- Make sure shower and bath drains work properly so water doesn't build up
- Keep water temperature low to avoid burns
- Use nonskid strips in tub or shower
- Use a shower curtain instead of a shower door, it's easier to get in and help someone if they fall in the shower
- Use tub tails or grab bars
- For people who fall during a seizure or have frequent seizures:
  - Use a shower chair or sit on bottom of tub and use hand held shower nozzle
  - Take showers when someone else is in the house

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<sup>1</sup> Sharon M. Benedict, Ph.D. et al. *Traumatic Brain Injury, Independent Study Course*. (Birmingham, AL: Employee Education System, 2010), 167. Accessed online March 2, 2016. <http://www.publichealth.va.gov/docs/vhi/traumatic-brain-injury-vhi.pdf>

<sup>2</sup> Aging in Place: Task Force Meeting. *Obstacles to Home Safety and Independent Living, Project GEM (Gerontologic Environmental Modification)*. (Cornell University, University, Joan and Sanford I. Weill Medical College, Unkn), Accessed online March 2, 2016. [http://www.environmentalgeriatrics.com/home\\_mod/task\\_force\\_mtg.html](http://www.environmentalgeriatrics.com/home_mod/task_force_mtg.html)

<sup>3</sup> Rebecca E. Blanton, *Overview of Veterans in California: March 2013 Testimony before the Joint Hearing of the Assembly Committee on Veterans Affairs and the Assembly Committee on Housing and Community Development*. (California Research Bureau: California State Library, 2013), 18. Accessed online March 2, 2016. <https://www.library.ca.gov/crb/13/13-020.pdf>

<sup>4</sup> Leah M. Martin, "Evaluating a Mind-Body Approach for Military Veterans with Chronic Pain" Master of Social Work Clinical Research Papers. Paper 226. (St. Catherine University, University of St. Thomas, 2013), 71. Accessed online March 2, 2016. [http://sophia.stkate.edu/cgi/viewcontent.cgi?article=1229&context=msw\\_papers](http://sophia.stkate.edu/cgi/viewcontent.cgi?article=1229&context=msw_papers)

<sup>5</sup> Housing Assistance Council Rural Research Brief. *Housing Our Heroes: Veterans in Rural America*. (Housing Assistance Council, 2013), 9. Accessed online March 2, 2016. [www.ruralhome.org/storage/documents/rrbriefs/rrb\\_veterans.pdf](http://www.ruralhome.org/storage/documents/rrbriefs/rrb_veterans.pdf)

<sup>6</sup> Department of Defense, Hearing Center of Excellence, Military Health System. *Stats and Figures*. (Department of Defense, 2012) Accessed online March 1, 2016. <http://hearing.health.mil/HearingLoss101/StatsandFigures.aspx>

<sup>7</sup> Epidemiology Program, Post Deployment Health Group, Office of Public Health, Veterans Health Administration, Department of Veterans Affairs. (2012). Report on VA Facility Specific Operation Enduring Freedom, Operation Iraqi Freedom, and Operation New Dawn Veterans Coded with Potential PTSD, from 1st Qtr FY 2002 through 3rd Qtr FY 2012. (Washington, DC: Author, 2012), 10. Accessed online May 2, 2016. <http://www.publichealth.va.gov/docs/epidemiology/ptsd-report-fy2012-qtr3.pdf>

<sup>8</sup> Gregg Zoroya, "Key Iraq Wound: Brain Trauma" IN "Brain Injury and War in Iraq." (Brain Injury Association of Oregon: Various, 2005), pp. 55-57. Accessed online March 2, 2016. <http://www.biaoregon.org/docetc/pdf/vets/Brain%20Injury%20and%20the%20War%20in%20IraqCombined-3-25-05.pdf>

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