



Public Policy Brief

2010-1a

Budget Impact of Treating Brain Injured Homeless Veterans With Biological Repair Treatment (Hyperbaric Oxygen Therapy)

February 27, 2010

It is now possible to successfully treat brain injured veterans and restore them as productive citizens at a fraction of the cost of the social services they would otherwise require.

- 1) There are currently 154,000 homeless veterans across the nation. California can be expected to have at least 10% of that number.
- 2) It is well established that 70-82% of all homeless persons are suffering from a brain injury. Among homeless combat veterans exposed to blasts, that number is nearly 100%.
- 3) There is an FDA-approved medical treatment that is the only non-hormonal treatment known to repair and regenerate human tissue. The drug is oxygen. When delivered at 7 to 12 times the normal atmospheric concentration in a hyperbaric oxygen chamber, it becomes an effective means of healing damaged brain tissue that will otherwise not heal. Of the 25+ brain-injured veterans treated in this manner to date, 80% have been able to return to active duty, work or school. All have been able to return to the basic activities of independent daily living, thus greatly reducing the cost of the maintenance and assistance they required pre-treatment.
- 4) Study participants have also experienced, on average, a 15 point IQ jump, a 37% reduction in post-concussion syndrome symptoms, and a 28% reduction in Post-Traumatic Stress Disorder (PTSD) symptoms.
- 5) The use of hyperbaric oxygen therapy (HBOT) for the treatment of brain injury is very safe and is NOT new. The navies of the world have been using it to treat neurologic decompression sickness since the 1930s. What is new is the understanding that HBOT can also be used to successfully treat other forms of brain injury.
- 6) Current Federal budget expenditures from the stimulus package aimed at the homelessness situation are \$2 billion from the Veterans Administration, \$1 billion from Housing and Urban Development for Emergency Housing, and \$1 billion from HUD for "Homelessness Prevention." The \$2 billion in VA money authorizes "medical treatment" as a component of the homeless abatement program for the first time in history.

- 7) In addition to the above programmatic costs, each unemployed homeless veteran is not earning an income. The average lifetime income of an uninjured veteran is estimated to be \$3 million, or \$75,000 per year based on a 40 year career. Loss of that income results in an average loss of Federal tax revenue of about \$19,000 per year (at 25%), with a corresponding revenue loss to state & local governments that varies based on the local income and sales tax rates. For California, the estimated revenue loss is estimated at \$3,683 per year based on state income and sales taxes ONLY. The state is likely to end up absorbing about half the estimated \$19,481 per year cost of caring for a homeless veteran estimated in the current stimulus, plus the added costs of any veterans that get incarcerated (current reports are the about 10% of county inmates are veterans from the current wars).
- 8) The cost of repairing a brain injured veteran with 80 treatments under the National Brain Injury Rescue & Rehabilitation Project protocol is \$20,000 in the State of California. Other related services, etc. from the CDVA and other state agencies (lodging, re-integration support, etc.) are estimated at \$5,000 per veteran.
- 9) **On the basis of recovery of lost revenue and avoided social services costs only, the time required for the CA government to recover the estimated cost of treatment and related services is about 28 months based on an 80% success rate (experienced in currently published NBIRR team HBOT 1.5 studies). When the avoided correctional system costs, avoided costs of family break-ups, and associated safety net programs, etc. are included, the time gets significantly shorter. Further, at least half of the funds the state would be spending for this therapy are stimulus funds from the Federal government. Therefore, the revenue recovery time to the state is effectively under 14 months.**
- 10) The potential economic benefits to the State of California from this very safe treatment are substantial. A proposal for a large, multi-center program to establish the effectiveness of this therapy and leave the CDVA with substantial long-term treatment capacity has already been submitted in preliminary form to the CDVA. If needed, a smaller 30 patient pilot trial to confirm the above claims should be completeable in less than 6 months, with the trends clear within 60 to 90 days. **California has stimulus funds earmarked for homeless abatement available sufficient to fund the above mentioned efforts. What is needed is the political consensus to do so.**
- 11) **This is an opportunity to improve that state's financial condition and simultaneously stake out a position of national leadership in an issue that is of great importance nationwide.**

This discussion was prepared based upon California statistics. The numbers for revenue and social services costs will vary from state to state but the cost recovery periods for biological repair of brain injured patients will be similar.