Social Impact

This project contains a numerous amount of societal impacts, both beneficial and harmful to those in society. We would like to think that this project would help solve multiple problems here in the US as well as in the world. The number of deaths resulting from brain injury is estimated at 52,000 people a year and 275,000 are approximated to be hospitalized. Nearly 75 % of people that have TBI (Traumatic Brain Injury) are from concussions and other mild forms of TBI. This problem not only affects health but also effects peoples wallets. “Direct medical costs and indirect costs such as lost productivity of TBI totaled an estimated $60 billion in the United States in 2000.3 “((<http://www.cdc.gov/traumaticbraininjury/statistics.html>)

Who’s at risk? In statistics reported by the cdc, falls are the leading cause of TBI’s and cause TBI’s in adults 65 and older and accounts for 61% of their TBI’s. Falls account for 50% TBI’s in children ages 0-14. (<http://www.cdc.gov/traumaticbraininjury/causes.html>)

When you get a concussion its due to the violent nature in which your brain is basically rattled around in your skull. In traumatic experience such as this it can cause brain swelling which then cause brain damage and can also result in death.

So let’s take a look at those two awful but simple problems. I say simple because the device that were working on, an autonomous thermo-regulation device to aid in controlling an individual's core body temperature using TEC’s, would greatly impact the statistics that were briefly mentioned in the beginning of this report, but how? This device can also be placed on the head to cool down the head as well and effectively the brain. This type of device with this type of design is not widely researched or promoted. This device is supposed to be a light weight, maneuverable, and cost effective solution to help prevent such deaths as mentioned above and to prevent such hospitalizations. This device would also help our wallets, helping to cut down on the strain of disability cost including but not limited to: Hospital care, special care due to brain impairment, necessary equipment to help with brain impairment, lost wages, Physical therapy, funereal cost and etc.