This paper addresses legal, cost, and policy aspects of meeting the educational needs of children with traumatic brain injuries (TBI) in Vermont. The first sections address the increasing incidence of TBI and implications of technological advancement. The next section stresses the importance of states establishing and maintaining statewide registries for TBI. A pending state bill to provide such a registry is noted, as are a proposal for a reformed health care program through the schools and the recognition of TBI with a formal legal definition by Congress in 1991. Cost factors in providing needed health care services to individuals with TBI are analyzed. Education is seen to be a tool both for the prevention of TBI and for identifying children with symptoms of TBI. Increased liaison among federal, state, and local government agencies to meet these needs is urged. Tables provide data on causes of TBI, indicators/symptoms of TBI, longer range sequelae of TBI, state registries, state and national data, referral in Vermont, relevant federal bills, and the proposed health care plan for Vermont and the United States. (Contains 46 references.) (DB)
TRAUMATIC BRAIN INJURY IN VERMONT EDUCATION

by

Donald P. McGee

A report submitted in fulfillment of the requirements for EDU 748, Professional Paper

at

CASTLETON STATE COLLEGE

1993
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TRAUMATIC BRAIN INJURY IN VERMONT EDUCATION

by

Donald P. Mc Gee

ABSTRACT

The U. S. Congress has not addressed the issue of traumatic brain injury (TBI) at all and a huge gap existed in our educational structure where a wide variety of people were summarily denied an equal educational opportunity. In July, 1991 the Congress passed a revision to PL 94-142 which included TBI, identified as such, in its law. Federal funds will be available to states under the provisions of PL 94-142 and Vermont may rank up there in the states to qualify for this funding given the proposals I've heard so far this year.

Obtaining a liaison between the Federal, State, & Local government agencies regarding TBI is vital to the future of the young people now in school. The children must understand that there is a support network available to boost them up and offer help.
TRAUMATIC BRAIN INJURY IN VERMONT EDUCATION

Traumatic brain injury (TBI) has gained public awareness in the last ten years as more and more youngsters are becoming the "victims". This can be seen nationally by the fact that over 50% of TBI cases result from motor vehicle accidents and 80% of deaths to children occur in the field before any hospitalization or medical care can be provided. In the 1970's almost 422,000 Americans per year were admitted to hospitals with head injuries which means about 200 out of every 100,000 people and this cost, in 1970 dollars, approximately $2.4 billion or, in 1980 dollars, approximately $3.9 billion in medical care. Children ages fifteen to twenty-four, who are male, outnumber every other group more than doubling those who are female.

TBI has more national effects as, by 1974 data, $4 billion were lost in employment to people with TBI. The physical, social, and cognitive deficits become severe enough to prohibit normal work and the employer must make adjustments to have a TBI patient return to the job. Alcoholism and drug addiction are part of the cause but, even the passage of laws forbidding alcohol and drugs to minors will not solve the problem. If the $4 billion figure is to be adjusted to the 1990's it will be seen going triple (3 times as high) as the 1970's which is $12 billion cost to the United States.

Due to the increase in medical technology and machinery many people survive severe head injury. Returning the
person to his/her normal job becomes a long-range process as the brain just doesn't heal as a broken bone. The brain is a soft mass of jelly-like consistency that floats in a bath of cerebral spinal fluid within a hard, unyielding skull. On the inside the skull is not smooth but, has a bony texture with vaults, ridges, and obstacles. Constant changes in the working environment and national economy are brought to bear on the TBI person's recovery as is the surgery done to solve his acute brain injury. Even though brain cells do not regenerate other parts of the tissue will pick up for those damaged. This takes time and is the reason for long-term care ranging from two (2) years and beyond. The cost of $12 billion will at least double from the first to the second year and beyond. We are talking serious money as the average of 4.1 to 9.0 million in "lifetime" care is being very conservative per patient. As Rick Smith put it "survival was the easy part. This is a search for adaptation, a battle with compromise, a pursuit of dreams."

Identify the problem of TBI and head injury in America is a first step in this process. It's like going down a dark alley being hit by an unknown but, to identify and define the problem is vital in securing a solution. As we approach the 21st century let's take a look at the problems presented by head injury:
(1) Progress in Technology/Social Fabric

We are entering a computer age where science/technology are fast outpacing the average. Progress in medicine has expanded life as more medications have been found to cure illness and prolong life. The advance of computers into the school is a reality for the 21st. century student as the progress of technology will become part of daily living.

Along with the progress of technology into the schools comes the issue of people living longer and the need to re-adjust medical benefits to provide them coverage for an extended period of life. Our educational systems need to expand and offer more courses to those of senior citizen age. Our systems, political and Constitutional, need to accommodate these folks. Medical coverage, including the progress, need to re-adjust. The term "rehabilitation" will become standard as the future generation will live longer and will need medication to survive.

The Congress, President, and State legislators have taken this to mind and have acted to reform health care in their respective roles. Hillary Clinton is the acting head of the President's task force on health care reform in America.
One of her major focus points is to reduce the amount of cost in health care while providing maximum coverage. Given the increasing life span and advances in technology an up hill task is faced.

(2) **Statewide Registry**

Each state needs to establish and maintain a statewide registry on head injury and, in particular, on TBI.

In New England this is not done. We have only two (2) states (Table 5.0) that have a statewide registry for TBI. Such registration has been limited by the economic conditions but, also a lack of money by the legislatures who pass laws but do not fund them properly. Vermont is an excellent example of this. Senator Wolk pass his bill (Table 8.0) but, it was never funded and done. The lack of income to the state forbid the law from taking effect. Head and spinal cord injury are permitted to exist because the legislature didn't have the money to fund the law Senator Wolk presented and the legislature passed in 1991. The creation of an injury trust fund and the elimination of DWI was put on a permanent hold simply because the legislature didn't have the funds to take actions and our
computer network sat idle since without the money there was no one to operate the machines. Simply put, Vermont, along with four other states in New England, need to establish a statewide registry among doctors, hospitals, schools, etc. to share the information of TBI and head injury. Such a registry will better enable the hospitals and physicians to diagnose and treat patients.

S-177, Senator Wolk's bill, provided for a statewide registry of head injured patients and the establishment of a commission of head/spinal cord injuries throughout Vermont. Since no money was funded no state agency came into existence. Section #7904 of the bill remains dormant as two years have elapsed since the bill passed. By having a statewide registry Vermont will have gone a long way in treating the disease of TBI as hospitals throughout the state can communicate through a link up of computers. No communication or co-ordination is where Vermont functions with each hospital operating separately and independently.

Laws passed by the Federal government are similarly limiting but not because of a lack of money. Pressure groups consistently monitor Congress and lobby them for the passage or defeat of each measure coming up for a vote. The passage
of any bill dealing with TBI would face such a challenge from the medical community, pharmacy industry, hospitals, and similar groups. The "victim", the one with the TBI, is helpless in their grasp of Congress.

(Table 8.0) will give you an idea of how the Congress operates and of how laws dealing with head injury are lobbied by forces far more powerful than those who are the victims of TBI. Senator Leahy (Vermont) helped to pass a revision to PL 94-142 which included TBI as one of the ailments covered by the act. PL 94-142 is a civil rights law and has no bearing on equal educational opportunity. There's no explicit mention of a relationship to health care but, there is upheld implied power in matters dealing with the Constitution. Here, Hillary Clinton is on safe ground making the case to include children and health care as a guaranteed right issued to all citizens. Even though our economics is hurting in America the nation needs to guarantee medical care to all in our society. It is beneficial to the economy and to the culture to do so and providing free medical care to a child is economically and culturally sound. Progress, such as the longer life span and other technological achievements,
must be accomplished by changing the laws and
the Constitution. The gap between science/technology
vs. the Constitution and the law must be narrowed.

In 1993, there are two bills before the
Congress dealing with TBI, one in the Senate
sponsored by Senator Kennedy (Massachusetts) and
the other in the House sponsored by Representative
Maxine Waters (California). The Senate TBI Act
and "Brain Injury Rehabilitation Quality Act"
both provide for a central registry of TBI clients
and prohibit the abuse of them by physicians
or others. Both measures will face strong lobbying
by the interest groups.

During the 1992 election campaign I ran
for the House on the issue of health care in
Vermont and proposed the Fibber Mc Gee Plan to
solve two uniquely Vermont issues (Table 9.0). First,
was to provide health care to the elderly
while they could maintain their income. Second,
to provide health insurance through the school
so that every child would see a doctor on a regular
basis during the school time and at no cost to
the parent. Property taxes in each local community
would be saved by such an approach since each
teacher would be required to pay for their own
health coverage and the local taxpayer would
decide on the educational system to be offered. This solved the problem of cost while insuring those most in need of medical care, the elderly and the children. Ironically, the Mc Gee Plan is already Vermont law but, it has never been funded (Table 9.0).

Fibber Mc Gee's Plan did not get proposed to the 1993 Vermont legislature but, the idea is sound. Our political structure would meet up with the rapid advances in science and technology as progress would have marched the full circle. The elderly can live longer because of the technological breakthroughs and the children will receive medical care in school. The need for medicine would have been met as the increasing demand of the elderly for the science and technology would be honored and living ten to twenty more years would be a privilege of age.

Unfortunately, I was not elected to office. The vote percentages clearly indicate a need for a radical change in health care insurance as I carried three of the four districts. In Vermont, the governor has taken a keen eye to making major reforms in the health care system and has invited Canadians into the state to explain their system of government managed care. Governor
Dean has attended meetings called by Hillary Clinton in Washington and has been active in pursuing the goal of reforming health care in America.

The bills proposed in Vermont and in the Congress have not been funded and do not exist. Laws requiring a national or statewide registry for the head injured in 1993-1994 are vital to the survival of those with TBI. In addition, this would decrease the cost to the taxpayer since the population suffering from head trauma would be identified and the money could be more closely targeted. In short, local control of the money would take place and the protection of the elderly and of the children would be at hand (Table 9.0).

In July 1991 the U. S. Congress granted TBI formal legal definition under PL 94-142. The catch up job for Vermont will need to engage in must begin immediately as the cost of medical care continues to rise and affect Vermonters. One of the key recommendations of this report is to monitor medical science, hospitals, and make sure that a patient with a head injury is coded either mild, moderate, or severe in terms of the injury and that a follow up examination
is performed on each patient. There is no rehabilitation agency in Vermont capable of monitoring and coding an individual at a later time since the passage of time has made this impossible and careful co-ordination is needed here so that the information on TBI is uniform when it goes out to schools, the work place, and the community. An agency needs to be established in Vermont to keep track of the records and co-ordinate the registry.

Briefly, let's talk about those who are the senior citizens. As I mentioned before the life span is expanding as people live ten or more years longer. Our insurance plans are not equipped for this excess requiring medical benefits and, in fact, the insurance companies have sought to increase the amount paid into such plans by those young enough and contributing to health insurance. Since science and technology have outpaced political reality in making monumental progress it's vital that the elderly are cared for in their expanding age. People are living longer and, as Karen Carpenter put it, "we've only just begun".

(3) **High Cost of Health Care**

Cost. More than anything in this study
the price tag is the bottom line. What is for free or how much does it cost? Some examples might be helpful:

(a) PL 94-142 was made law in 1991 and shortly thereafter the legislature passed Senator Wolk's bill in Vermont. Since there was no funding "volunteers" would need to be found to staff the Advisory Council on Head Injury. This council meets four times per year and reports to the governor. They are not paid and they are not funded.

(b) TBI patients vary in the amount of money they receive from the Federal and State governments. Some receive private insurance while others receive a stipend from a law suit that was filed. Many receive neither Federal, State, insurance, or a law suit stipend. They are in short destitute and in need of help. One is reminded when one looks at the amount of money involved about the rich vs. the poor; urban vs. rural; black vs. white, etc. We've created a society of rich on the top versus the poor on the bottom with a middle class not existing. We are creating a system based on cost where the rich make it and the poor do not.
(c) Administrative fees charged by insurance companies for processing your health care claims. Congressman Sanders (Vermont) points to this as being criminal. The fact that BC/BS charges 24¢ of every dollar for administrative fees. In 1991, for instance, $750 billion will be spent in the U. S. for health care and the elderly will spend 18% of their income on medical care, in spite of medicare. In Vermont Senator Rivers points to 41,000 who have no health insurance for 1992. Nationally this figure comes to approximately 36 million Americans who have no health insurance. In Vermont, $5 million per year will be spent on rehabilitation for head injury patients (1992 data).

(4) Education: A Preventive Tool

Education and the training of those who teach regarding TBI is vitally important to those who suffer from head injury. Learning to identify the symptoms of head injury and the care necessary for the "victims & survivors" is an important part of education and vital to the children. Teachers need "in-service" instruction on head/spinal cord injury and need the aid in identifying those
with the disease.

Schools should consider instruction in alcoholism and drug addiction as being a part of the curriculum with an emphasis placed on the amount of deaths attributed to alcohol/drug related usage. This approximates 66% of teenage deaths in males age fifteen to twenty-four. Over one million children suffer from TBI or head injury per year and the schools must pick this up.

Teaching the students is only one phase of education's job. Another phase is to inform the public and use the school as the place to sound off regarding head injury. Parents, as well as most people, don't understand the complicated problems of head injured people as they tend to identify memory loss, lapses of judgement, personality changes, and "laziness" as being part of their son or daughter's growing up. An educated faculty on head injury can only work as a plug for any school system.

The National Education Association (NEA) reports that 5% of the teaching population have heard about TBI and 8% of special education knows about head injury. Most states do not have a head injury listing and don't have any in-service sessions regarding head injury offered to the
McGee 14

teachers (Table 10.0). In short, most teachers have no knowledge of TBI or of head injury. The education of teachers on head injury is essential for the betterment of education, drug addiction, and the like.

It's important that the Department of Education become involved to at least educate the teachers in Vermont as to the symptoms/indicators of TBI in children. In-service programs might be a way to sway that 5 to 8% who know about TBI to get involved. The first step for teachers is to decide on a definition of the term TBI and to use special education as a facilitator of this effort under PL 94-142. Ron Savage has written "students with TBI face somewhat different emotional stresses from those experienced by learning disabled students, since they must deal with a loss of capacity in addition to the ongoing experiences of failure and frustration".

(5) **Liaison: Federal, State, & Local**

Effect liaison between Federal, State, and Local government agencies so that the more local the control the better administered the program. It is under local control that the survivors of a head injury are provided support and aid be it in property tax relief, support of schools,
and in geneology. It is the type of aid that is vital to support the family of one who is head injured.

Communication occurs best under local control and the support of schools, i.e., Fibber McGee's Plan, works best when locally administered. The competition for money from Washington D.C. must come to an end as those who have a legitimate need for funds will be afforded the money.

At the present time there is no national registry for those who have head injury and only fifteen states have a statewide program. This should change as Congress in 1993-94 has the chance to make it happen. It is the chance to establish the kind of liaison of which we speak.

These five (5) steps will help to resolve the issue of head injury in Vermont as well as spinal cord, drug addiction, etc. This is a first attempt at this type of report but, it is a necessary one especially since head injury, TBI, has now reached a second decade. The research has been exhausting but, given the way states have treated head injury it is not surprising. Each of the states must come up with a listing, a statewide registry, of head injured people. Each state must educate the teachers into the meaning behind head injury. Each state must use the progress in science/technology to benefit those who suffer head
injury. Most important, each state must work to establish liaison, particularly on the local level, to help those with head injury readjust to society. This is also true of those who are elderly, living longer than originally anticipated.

Computers have come of age and we, as a society, need to re-adjust and make use of them for our benefit. Education is a vital step in this process as the needs of the children will reflect on our society.
**TABLE 1.0**

**CAUSES FOR TBI**

(National Head Injury Foundation, NHIF, 1989; Champlain Head Injury Program & traumatic head injuries, 1990)

1. Motor vehicle accidents  
   (accounts for 50% of TBI cases)  
   (Savage, Ronald "An Educator's Manual etc.", National Head Injury Foundation).

2. Falls

3. Industrial accidents

4. Sporting accidents

5. Muggings

6. Gunshot wounds
TABLE 2.0

INDICATORS/SYMPOTMS OF TBI
(National Head Injury Foundation, NHIF, 1989; Champlain Head Injury Program & traumatic head injuries, 1990)

1. Loss of consciousness (coma)
2. Blood of fluid from ears, nose or throat
3. Dizziness/Headaches
4. Seizures
5. Loss of memory of events immediately before injury
6. Visual disturbances
7. Vomiting
8. Staggering, loss of balance, muscle weakness
9. Numbness of either arm or leg
TABLE 3.0

VERMONT - INDICATORS/SYMPTOMS OF TRI

(Marceau, Richard "Interview", 'Lenny Burke Farm', 1991)

1. Loss of memory of events
   The most common type of symptom seen in every patient. Estimate 80% suffer from a loss of memory which cannot be re-achieved.

2. Numbness of either arm or leg or both.
   A direct result of the surgery on the brain where some cells are permanently destroyed and others have not picked up.

3. Dizziness/Headaches.
   Another result of the surgery where brain cells have been destroyed and the brain has not made the corrective function.

4. Staggering, loss of balance, muscle weakness.
   Regaining the strength on both the left and right side of your body following brain surgery. A degree shift in the body is noticeable as the person cannot cope with the surgical manipulation of his/her brain.
TABLE 4.0

LONGER RANGE SEQUELAE OF TBI


Any/all of the below listed may occur to some degree:

COGNITIVE

(1) Memory loss (short & long term)
(2) Problems with concentration, attention, & arousal
(3) Problems in planning & taking action
(4) Difficulty in recognizing own cognitive deficits/limits
(5) Difficulty with abstract thinking (i.e. needs simple & concrete directions)
(6) Difficulty in generalizing from a specific time, place, or idea
(7) Spatial disorientation
(8) Slowness of thought processes
(9) Slowness and/or difficulty with speech

PHYSICAL

(1) Fatigue in maintaining attention
(2) Visual impairment
(3) Hearing impairment
(4) Loss of taste and/or smell
(5) Seizures
(6) Hemiparesis (one side of body is paralyzed)

PSYCHOSOCIAL

(1) Anxiety & depression
(2) Emotional lability (shifts in mood)
(3) Denial

(4) Inappropriate behaviors (i.e. impulsivity, lack of social judgement, subtleties, inhibition)

(5) Egocentricity

(6) Agitation/Outbursts

(7) Sexual dysfunction or inappropriateness

(8) Loss of social network & feeling isolationist
TABLE 5.0

**STATEWIDE REGISTRATION - New England**

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<thead>
<tr>
<th>STATE</th>
<th>REGISTRATION</th>
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<tr>
<td>Maine</td>
<td>X</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>X</td>
</tr>
<tr>
<td>Vermont</td>
<td>X</td>
</tr>
<tr>
<td>New Hampshire</td>
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<tr>
<td>Massachusetts</td>
<td>X</td>
</tr>
<tr>
<td>Connecticut</td>
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TABLE 5.1

**REGISTRATION IN VERMONT**

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>% TBI</th>
<th>% INCREASE</th>
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<tr>
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<td>0</td>
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<td>Department of Education</td>
<td>0</td>
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<tr>
<td>Department of Education: Special Education</td>
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<td>0</td>
</tr>
<tr>
<td>Department of Health &amp; Human Services</td>
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<td>0</td>
</tr>
<tr>
<td>MCHV - UVM: Dr. Ruess &amp; Wilmuth</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Psychiatry &amp; TBI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCHV - UVM: Dr. Steven Wald</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Adult (1981-1986)</td>
<td>1200</td>
<td>?</td>
</tr>
<tr>
<td>Children (1981-1986)</td>
<td>600</td>
<td>?</td>
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<tr>
<td>Office of the Governor</td>
<td>0</td>
<td>0</td>
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<tr>
<td>HIS (Lenny Burke Farm)</td>
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<td>-</td>
</tr>
<tr>
<td>(1987-1993)</td>
<td>700</td>
<td>?</td>
</tr>
<tr>
<td>Research &amp; Statistics: Department of Health</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(Gauthier Report)</td>
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**YEAR** | **TBI PATIENTS**
---|---------
1985 | 867
1986 | 736
1987 | 732
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<tr>
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<td>1989</td>
<td>663</td>
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<td></td>
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<tr>
<td></td>
<td><strong>3697 Total</strong></td>
</tr>
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</table>
TABLE 6.0

STATISTICAL DATA

NATIONALLY

(1) 150,000 to 200,000 TBI per year in America

(2) 50% TBI in motor vehicle accidents.

(3) 66% are males between the ages of 15 to 25. Injuries claim the most lives in males ages one through thirty-four and are the leading cause of death up to age forty-four.

(4) Five to ten (5-10) years of intensive rehabilitation with a "long term follow up" is required for severely TBI recovery.

(5) 4.1 to 9.0 million dollars in "lifetime" care is required for each TBI survivor.

(6) "Head injury kills more Americans under the age of 34 than all other causes combined and has claimed more lives since the turn of the century than all U. S. wars combined." (National Head Injury Foundation, 1989).

(7) "Over a million children and adolescents suffer TBI each year". (Savage, Ronald, An Educator's Manual et al, 1989). This leaves them with temporary or permanent disabilities.

VERMONT DATA

(1) No registry is kept in Vermont.

(2) "Due to the increase in technology, many people are surviving severe head trauma. In this state alone there are over one thousand victims of traumatic brain injury per year, the largest percentage of this population being men under the age of 35." (Champlain Head Injury Program, 1990).
TABLE 7.0

STATE OF REFERRAL - VERMONT

(1) TBI Case in Hospital for Acute Treatment

(2) Hospital Vocational Rehabilitation Co-ordinator refers the patient to Vermont Vocational Rehabilitation

(3) State of Vermont VR assigns an out-of-hospital counselor

(4) VR refers the patient/client to HIS under the existing HIS/VR contract for services

(5) TBI client reports to the Lenny Burke Farm for a five (5) day stay at the farm where constant evaluations on the brain are performed

(6) LBF & VR, base on the study at the farm, form an evaluation of the client and either accept or reject him/her from the TBI program. If accepted the following takes place:

(a) An independent apartment is found for the client. The term patient is now officially dropped by the State.

(b) A thirty to ninety day farm stay may be authorized to prepare the client for apartment living.

(c) The apartment is "self supporting" in that the client, either through SSI, SSDI, private insurance, or other funds, sustains the apartment on his/her own. VR is the only official contact in the State of Vermont.

(d) VR is responsible for coming up with the components of a work/study plan to re-enter society.

(7) If rejected as not "appropriate" the client must be "farmed out" to an agency for taking care of those who cannot yet make it in society.
### TABLE 8.0

**FEDERAL HEAD INJURY BILLS**

<table>
<thead>
<tr>
<th>HOUSE</th>
<th>1993</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S-2949</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>(Senator Kennedy: TBI Act)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SENATE</th>
<th>1993</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S-3002</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>(Representative Waters: Brain Injury Rehabilitation Quality Act. Bill would create (a) A central registry; (b) Marketing standards.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STATE HEAD INJURY BILLS. — VERMONT**

<table>
<thead>
<tr>
<th>HOUSE</th>
<th>1993</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S-177</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Senator Wolk '91)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*Provides a fine of money for DWI offenses; a fund for head/spinal cord injured.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SENATE</th>
<th>1993</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S-177</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Senator Wolk '91)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FEDERAL HEAD INJURY BILLS (1992)**

<table>
<thead>
<tr>
<th>HOUSE</th>
<th>1993</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PL 94-142</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(Senator Leahy: Revision to the civil rights law insuring those with TBI &amp; giving the disease national recognition)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SENATE</th>
<th>1993</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PL 94-142</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
### TABLE 9.0
**FIBBER MC GEE'S PLAN - Health Care in Vermont & The Nation**

(1) Rich or poor, living in the city or in the rural country, every American is entitled to the same Quality Health Care. There shall be no difference in the type of service for an urban vs. a rural resident of America.

(2) **BENEFITS**

(a) Teachers & the elderly shall be the supporters of this plan. Each shall contribute $1 for one-years worth of health insurance coverage which shall run from January 1 until the following December 31.

(b) Teachers: (1) School board is left with extra money to invest in the school.

(2) Rebates can be afforded to the taxpayers.

(3) Needed school investment can be made, i.e. special education, books, sports, storage space, etc.

(4) The sum of $1 covers the teacher, husband-wife, & children for the entire year.

Elderly: (1) No payment of Medi-Comp premiums to help finance Medicare/Medicaid.

(2) No deductibles.

(3) Long-term care, home care, & prescription drugs are paid for under Fibber Mc Gee's.

Children: (1) Protects those fragile young souls while they are in school by having the full-time employment of either a doctor or nurse.

(2) Extension, to the age of 18, of all health care benefits (ex.: Dr. Dynasaur).

(3) No cost to the parents to have their child examined in school.

(3) Revitalizing the economy is one of the major goals of this proposal.
FIBBER Mcgee's Consideration/Repeal of Existing Law

Consideration
(a)  S-127
(b)  H-733 (Vt. Law - May 11, 1992)
(c)  S-177 (Vt. Law - May 5, 1992)
(d)  H. R. 2530 (Sanders: 102d. Congress of the U. S.)
(e)  S-127 (2nd. edition)
(f)  No. 160 (H-733 - Vt. Law - May 11, 1992)

Repeal
(a)  S-127/H-733
    One plan is to be based on the concept of a
    single-payer system and one on a regulated multi-
    payer system.
(b)  H. R. 2530
    Single payer as the plan for funding.
(c)  H. R. 2530
    The Federal block grant will be funded with
    a progressive, floating surcharge on the individual
    and corporate income taxes.
### TABLE 10.0

**TEACHERS IN VERMONT (TBI)**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PERCENTAGE WHO KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know About TBI</td>
<td>5%</td>
</tr>
<tr>
<td>Special Education (TBI)</td>
<td>8%</td>
</tr>
<tr>
<td>State Dept. of Educ.</td>
<td>0%</td>
</tr>
<tr>
<td>&quot;In-service&quot; on TBI</td>
<td></td>
</tr>
<tr>
<td>Locally Reported TBI Cases</td>
<td>0% *</td>
</tr>
<tr>
<td>Locally Reported Nurses Reports Regarding TBI</td>
<td>0% *</td>
</tr>
</tbody>
</table>

*(Richard Lang, Executive Director & Molly Burke, President, Vermont NEA, P. O. Box 567, Montpelier, Vermont 05602)*

* Verbally reported to the Vermont NEA. There is no record kept.
REFERENCES


Institute of Rehabilitation Medicine, Working Approaches To Remediation of Cognitive Deficits in Brain Damaged Persons, Institute of Rehabilitation Medicine, New York University Medical Center, 400 East 34th. Street, New York, New York 10016, 1982, Rehabilitation Monograph #64.


McGee 32


Santa Clara Valley Medical Center, *Severe Head Trauma: A Comprehensive Rehabilitation Approach*, Head Trauma Project, 751 South Bascom Avenue, San Jose, CA 95128, 1981.


National Head Injury Foundation, 333 Turnpike Road, Southborough, MA 01772, 1988, p. 1-128.


Zencius, Arnie, Wesolowski, Michael, & Burke, William, Long Term Programs in Head Injury Rehabilitation,


Personal Interviews:
(a) Vermont Vocational Rehabilitation:
   Jeff Bush (State of Vermont)
   Sheila Kirby
   Diane Dalmasse
   Dawn Griswald
   Amelia Lissor
   Allan Willard (State of Vermont - Supervisor)
   Diane Brisson
   Carolyn Ravenna

(b) Physicians:
   New Medico: Dr. Jim Taylor
   Dr. Donald Walsh
   Dr. John Robinson
   Dr. Robert Troendle
Dartmouth-Hitchcock:  Dr. Robert Harbaugh  
Dr. Mark Hegel  
Dr. Hayes  

Mt. Ascutney:  Dr. Nancy Bagley  
Dr. Gebhardt  
Dr. Chapman  

Medical Center Hospital of Vermont:  Dr. Joanna Ruess  
Dr. Mary Wilmuth  
Dr. Janis Peyser  
Dr. Steven Wald  

Psychologists:  Dr. Dorie Rapp  

(c) Facilities:  
Highwatch:  Cricket Weston (Public Relations)  
Georgette Hunter  
Jodi Harrington (Vt. Relations)  
Joe Dickerson (Vt. TBI)  

Lenny Burke Farm:  Richard Marceau (Director)  
Emma Burke (Owner)  
Ellen Marceau  

(d) Education:  
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Janice Willey (Special Education - Bristol)  
Shirley Bingham (Special Education - Wallingford)  
Richard Boltax (Dept. of Education)  
Richard Lang (Executive Director - Vt. NEA)  
Molly Burke (President - Vt. NEA)  
Lloyd Peter Kelly (President/CEO - Vt. Achievement Center)  

(e) Government:  
David Wolk (Assistant to the Governor)  
Howard Dean (Governor of Vermont)  
Janice Cole (Dept. of Social Security)  
Dr. Ronald Savage (New Medico - Troy)  

"Understanding Brain Injury", Video Tape(s)