

**REPORT TO THE TWENTY-EIGHTH LEGISLATURE**

**STATE OF HAWAII  
2015**

**PURSUANT TO SECTION 321H-4  
HAWAII REVISED STATUTES**

**REQUIRING THE DEPARTMENT OF HEALTH TO PROVIDE  
AN ANNUAL REPORT ON THE ACTIVITIES UNDER  
THE NEUROTRAUMA SPECIAL FUND**



**PREPARED BY:**

**STATE OF HAWAII  
DEPARTMENT OF HEALTH**

**December 2014**

## EXECUTIVE SUMMARY

In accordance with the provisions of Section 321H-4, Hawaii Revised Statutes (HRS), "Neurotrauma," the Department of Health (DOH) respectfully submits this annual report on the activities of the Neurotrauma Special Fund (NSF).

The NSF was established by Act 160, SLH 2002, for a comprehensive system to support and provide services to survivors of neurotrauma. The sources of funding for the NSF are surcharges from traffic citations that are related to causes of neurotrauma injuries.

Surcharges from the specified traffic citations have been deposited into the NSF since January 2003. The deposited amounts going into the NSF are undergoing a slight downward trend; never-the-less, the DOH continues to work with neurotrauma survivors and their families to identify priorities for expenditure of moneys that are available in the NSF. Based on the feedback received from neurotrauma survivors and constituents, the first priority was to provide neurotrauma survivors assistance with access to appropriate services and supports. The Neurotrauma Advisory Board (NTAB) provides stakeholder input into the DOH's neurotrauma activities and advisory recommendations regarding the special fund.

In November 2012, one neurotrauma position was filled and a second position was filled in January, 2014. However, the staff hired for that second position has taken another position within the Division in October, 2014. The Developmental Disabilities Division (DDD) of the DOH is currently in the process of hiring for the second Neurotrauma position and also establishing an additional Planner position. As a result of filling one position, the program is now able to sustain the statewide neurotrauma help line, neurotrauma registry, educational activities and promotion of neurotrauma awareness statewide. The neurotrauma program looks forward to further accomplishments and implementing new activities once it is fully staffed.

During FY 2014, the DOH has worked diligently and successfully to implement activities to use the NSF in accordance with the mandate of Section 321H-4, HRS, in collaboration with the State's Traumatic Brain Injury Advisory Board (STBIAB), NTAB, Brain Injury Association of Hawaii, families, survivors, and other community stakeholders. The DOH supported:

- The Concussion Management Study involving high school athletes in Hawaii's public schools as well as concussion education and awareness presentations statewide targeting youth leagues and organizations;
- The Statewide Stroke Network with the Queen's Medical Center to develop and implement a process to provide citizens of Hawaii with appropriate access to care in their respective communities;
- The development and implementation of a neurotrauma registry by the University of Hawaii, Pacific Basin Rehabilitation Research and Training Center.

For FY 2015, the DOH will continue to work closely with the STBIAB, NTAB and community organizations to identify opportunities to meet its goals which are consistent with Chapter 321H-4, HRS. The Neurotrauma program will meet its mandates by continuing its contracts to collect and analyze data, fostering training to prevent disabilities, educating and dissemination of information to Traumatic Brain Injury (TBI), stroke and spinal cord injury survivors and their families, and planning strategically to provide a comprehensive neurotrauma system.

## **REPORT TO THE LEGISLATURE IN COMPLIANCE WITH SECTION 321H-4, HAWAII REVISED STATUTES**

### **Introduction**

Pursuant to Section 321 H-4, Hawaii Revised Statutes (HRS), the Department of Health (DOH) respectfully submits this annual report on the activities of the Neurotrauma Special Fund (NSF) to the Twenty-Eighth Legislature.

Chapter 321H, HRS, mandates the DOH to “develop, lead, administer, coordinate, monitor, evaluate, and set direction for a comprehensive system to support and provide services for survivors of neurotrauma injuries.” These statutes also require the DOH to establish a Neurotrauma Advisory Board (NTAB) and administer a NSF. The NSF began accumulating moneys from neurotrauma related traffic citation surcharges (speeding, drunk driving, not wearing seat belts, leaving the scene of an accident involving bodily injury) as of January 1, 2003. This report provides a status report on the fund activities for the period of October 2013 to September 2014.

### **Neurotrauma Advisory Board (NTAB)**

The NTAB was established by Act 160, SLH 2002, to advise the DOH on the use of the NSF and development of a system of supports for persons with neurotrauma. The Board’s membership constitutes key stakeholder group representation on a statewide basis and has developed strategic goals to carry out their functions. Current members of the Board are listed in Attachment I.

### **Use of the Neurotrauma Special Fund**

Section 321H-4, HRS, specifies that the NSF shall be used as follows:

- 1) Education;
- 2) Assistance to obtain access to services;
- 3) Creation of a registry of neurotrauma injuries; and,
- 4) Necessary administrative expenses.

#### **(1) Educational activities:**

The DOH staff continued to support numerous educational activities through: a) collaborating and contracting with health organizations; b) sponsorship and participation in conferences; c) public exhibits; d) dissemination of educational materials to board members and list serve; (e) board membership of individuals with neurotrauma and their families; and f) utilization of the NSF to procure education related materials and activities for public dissemination.

DOH has been providing neurotrauma education since 2008 through contracts and partnerships with the University of Hawaii, Pacific Basin Rehabilitation Research and

Training Center's (UH-PBRRTC) Ho'oikaika Traumatic Brain Injury Peer Mentoring Program, ThinkFirst Hawaii Chapter, and the Brain Injury Association of Hawaii (BIA-HI). The contract with the UH-PBRRTC came to an end in September 2012 and as a result, the volunteer mentors who were part of the Ho'oikaika program has renamed themselves to Hui Malama Po'o and they continue to meet on a regular basis to carry on with experiences gained from the Ho'oikaika project.

In February 2014, the Brain Injury Association of Hawaii (BIA-HI) opened The Brain Injury Resource Center. This was the result of a previous collaboration between the Department of Health and the BIA-HI whereby funding was provided to the BIA-HI to establish a framework for a resource center. The BIA-HI Resource Center is currently impacting the lives of 5 individuals with brain injury who have been accepted to the program.

The DOH Neurotrauma Program has funded, since August 2010, the University of Hawaii-Manoa, Department of Kinesiology and Rehabilitation Science (UH-KRS) to conduct a research study on concussion management of all high school athletes in the State of Hawaii to:

- Compare the Immediate Post-Concussion Assessment and Cognitive Testing (ImPACT) concussion management software to obtain baseline and post-concussion test results with the Graded Symptom Checklist (GSC) tool;
- Provide primary care physicians and high school athletic trainers with data from the concussion management program to so that they may make recommendations to allow for student athletes' safe return to play;
- Submit Hawaii-based longitudinal research evidence for concussion management protocol utilizing data obtained from ImPACT, Standard Assessment for Concussion (SAC) to develop best practices;
- Train high school administrators, athletic trainers, physicians, and neuropsychologists participating in the study; and
- Educate coaches, parents, and athletes on concussion.
- Provide concussion awareness and education to community and youth organizations

A total of 67 schools participated in the baseline testing and of the 67 schools, 21 schools were private schools belonging to the Interscholastic League of Honolulu (ILH). The remaining schools are all public schools statewide. In school year August 2013-September 2014, a total of 12,434 students were baseline tested on the ImPACT management software. Of these 12,434 student-athletes, a total of 1,692 concussions were reported during this reporting period as compared to 1,140

concussions reported in the previous school year. The increase can be attributed to several factors: 1) improved reporting by student-athletes, coaches and parents; and 2) increase in education and awareness on concussions and its short and long term consequences.

The UH-KRS also provided data to the DOH covering injury rates by sport and gender covering school years 2013-2014. It is of no real surprise that the sport of football continues to have the highest percentage of concussions mainly due to the sport having a significantly higher number of participants. To determine risk for concussion, it important to determine what the rate of injury is by sport. UH-KRS, based on the number of participants, athlete exposures and concussions by sport, determined that girls judo continues to have the highest rate of concussions by sport per 10,000 athlete exposures, followed by football, girls basketball, girls soccer, and boys judo. Athlete exposure is a unit of susceptibility to injury, which is defined as one athlete participating in one game or practice, in which he/she is exposed to the possibility of athletic injury. These findings will provide athletic trainers, school administrators, and school athletic governing bodies statewide with objective injury data that directly influences the development of concussion education, prevention and management programs.

All students who are in the 9<sup>th</sup> and 11<sup>th</sup> grades participating in contact sports that have risks for concussion from all Hawaii public high schools, at the start of the 2014-2015 school year, will continue to be administered the ImPACT assessment tool for baseline measurement and/or post-concussion assessment. A student-athlete having a baseline test is critical to an athletic trainer when assessing their return to participation following a concussion. Without a baseline test, a student-athlete may be “cleared” to return to participation prematurely and puts them at risk for a more severe concussion.

A major component of the contract with UH-KRS is in the area of increasing education and awareness of concussion amongst high school student-athletes, school administrators, game officials, parents, and athletic association officials. In December 2012, the DOH modified its contract with the UH-KRS to develop and implement a statewide concussion educational and awareness program specifically targeted to organizations and facilities that care, support, and provide services to children, youth and their families, and facilitate access to athletics. During the period August 2013 to September 2014, UH-KRS completed 24 community presentations on education and awareness on sports concussions to organizations such as the American Youth Soccer Organization (AYSO), Pop Warner Organization (Oahu and Kauai), City and County of Honolulu Parks and Recreation, Play Sports Hawaii, Big Boys Football League, Hawaii Island Youth Football League, United States Judo Federation-Hawaii, and Hawaii Association for Health as some examples of organizations that received concussion education and awareness from UH-KRS through a contract from the DOH. Also in attendance were athletic trainers, coaches, sports officials, team volunteers, youth players, and parents. There were in excess of 1,300 participants that received concussion awareness and education. The UH-KRS also conducted post-test surveys based on random selection for each

education and awareness event. Data has been gathered based upon completed surveys that reflect participants have a good understanding of what is a concussion, how to recognize signs symptoms of a concussion and what to do and who to contact in the event of a concussion or a concussion is suspected to have occurred.

Lastly, the UH-KRS has developed a website ([www.hawaiiiconcussion.com](http://www.hawaiiiconcussion.com)) to post reports and articles on concussion and provide information about concussion related activities in Hawaii high schools, parent groups, and community organizations. Also contained on the website are awareness and education materials on concussion focused specifically on high school sports, coaches, athletic trainers, parents, state and national resources, news, and upcoming concussion related events. During the school year August 2013 – September 2014, the UH-KRS included a section on the website that focuses on concussion awareness and education targeted at children and youth, their parents, youth sports, recreational organizations, childcare facilities and community organizations.

DOH staff will continue efforts to promote education and awareness activities through partnerships and collaborations with the respective advisory boards and community stakeholders statewide.

(2) Assistance to individuals and families to identify and obtain access to service activities:

The DOH Neurotrauma Program funded the Queen’s Medical Center (QMC) to:

- Establish a statewide stroke network to improve statewide access to timely, expert stroke care evaluation and treatment with Tissue Plasminogen Activator (tPA) without the need to transfer patients to a tertiary facility;
- Educate the public about:
  - the signs and symptoms of stroke,
  - the need for emergent evaluation,
  - the availability of effective treatment with tPA; and
- Teach medical providers and support development of stroke care pathways to expedite evaluation and treatment, monitor for complications, and provide standard post-acute stroke care.

As of October 2014, there are four hospitals serving as “spoke” sites that are linked to QMC serving as the “hub” site. The four sites are: Molokai General Hospital, Wahiawa General Hospital, Hilo Medical Center, and QMC West. The fifth spoke site is Kona Community Center which was initiated in September 2014. A contract has been initiated with Maui Memorial Medical Center as the sixth spoke site. QMC is currently in the talking stages with North Hawaii Community Hospital as the seventh spoke site. Emergency department doctors and nurses, hospitalists, and administrators of these hospitals have been educated on stroke care paths and protocols and received in-services on use of the telemedicine technology. As of

October 2014, there have been a total of 74 telestroke calls. 58 were completed calls and 16 were incomplete (non-telestroke or experienced technical difficulties). There were 11 telestroke calls from Molokai General hospital, 30 calls from Wahiawa General Hospital and 17 calls from Hilo Medical Center. 26 patients were administered tPA with 24 patients being transferred to QMC.

Community Education on Stroke:

- QMC West Oahu Community Health Fair was held in 5/2014 and educated over 1,000 individuals on stroke signs and symptoms and the telestroke network.
- A public health campaign “Spot a Stroke” was a joint effort between the DOH, QMC, and the American Heart Association that placed stroke education signs on every Oahu bus from May 2014-September 2014. This campaign resulted in an estimated 14 million impressions on Oahu bus riders.

(3) Development of a registry within the State to identify incidence, prevalence, needs, and related information of survivors of neurotrauma injuries:

In March 2013, the DOH executed a contract with the University of Hawaii, Pacific Basin Rehabilitation Research and Training Center (UH-PBRRTC) to: 1) Develop and administer a neurotrauma registry; and 2) develop and disseminate an effective public service announcement and social media campaign to provide education and awareness of neurotrauma and encourage participation in the neurotrauma registry. Information obtained and analyzed from the registry will assist the DOH in prioritizing activities to support the needs of neurotrauma survivors. Creating and maintaining a neurotrauma registry is complementary to the Hawaii DOH, Healthy Hawaii Initiative in the areas research, public and professional education, and evaluation.

As of September 2014, the UH-PBRRTC accomplished the following activities:

1. Enrolled 71 individuals into the Hawaii Neurotrauma Registry (HNTR).
2. Distributed 3,883 of their brochures and 4,200 Neurotrauma educational materials at various public events statewide.
3. Conducted 15 presentations on the neurotrauma registry to nearly 200 professionals who interact with or provide support or direct services to survivors of neurotrauma injuries.
4. Designed and ran print ads on neurotrauma and the registry. The first ad on stroke was published in the Star-Advertiser in September 2014. The second print ad on spinal cord injury was published in October 2014 in the Star-Advertiser. The third print ad on traumatic brain injury was also published in October 2014 in the Star-Advertiser.
5. A total of 104 radio Public Service Announcements were done on neurotrauma and the registry.
6. HNTR facebook page was created and effective as of 7/2014 with 15 Facebook posts and is maintained continuously.

As a related research activity, HNTR is compiling information on service and support needs (needs assessment) of individuals who have experienced a neurotrauma injury and their families. Information of available services and supports to individuals and

families will go into a searchable database operated and maintained by the UH-PBRRTC.

In accordance with the contract, the UH-PBRRTC is required to establish an advisory board for the neurotrauma registry. There are five individuals have agreed to be on the HNTR Advisory Board. The first meeting is scheduled for the latter part of 2014. HNTR will continue to seek more Advisory Board members, especially from the Neighbor Islands.

(4) Necessary administrative expenses to carry out this chapter:

In FY 2014, the DOH expended \$27,448 from the NSF for various educational and awareness activities on a statewide basis. These expenses were consistent with goals and objectives set forth by the STBIAB, NTAB, and DOH.

**Collection and Expenditure of Funds**

In FY 2014, a total of \$801,742 has been deposited into the fund from traffic surcharge collections. This amount is a \$59,465 decrease as compared to FY 2013. Total encumbrance as of June 30, 2014 was \$462,306. As of July 1, 2014, there was a beginning unencumbered cash balance of \$2,228,553 in the NSF.

A projected FY 2015 budget for the NSF is provided in Attachment II. The DOH Neurotrauma Program with the input from the STBIAB, NTAB and other community constituents plans to utilize the NSF in accordance to Section 321H-4, HRS, through:

- **Concussion Management Project** (see above) continuation with the University of Hawaii at Manoa;
- **Statewide Stroke Network** with Queens Medical Center to increase capacity to treat patients throughout the island chain by educating providers to assess patients to determine appropriateness of using Tissue Plasminogen Activator (tPA) to prevent disabilities without having to transfer patients to a tertiary facility;
- **Neurotrauma Registry** (see above) continuation with the University of Hawaii at Manoa, Pacific Basin Rehabilitation Research and Training Center; and
- **Education & Dissemination of Information** to the public through dissemination of written information (e.g. TBI, Spinal Cord and Stroke Discharge folders; conferences; helpline; mentoring, etc.) but also through its website. The website allows the program to give and receive feedback from the public.

To date, one of the three Neurotrauma special funded positions is filled. The DOH is hopeful that its second and third position will be filled by the end of FY

2015. Duties of the Neurotrauma positions will include planning and coordination of neurotrauma awareness/education activities, information and referral supports for individuals with neurotrauma and their families, support for access to appropriate neurotrauma services, support for the Neurotrauma and State Traumatic Brain Injury Advisory Board (STBIAB), needs assessment, neurotrauma trending, and systems analysis.

The addition of one employee has allowed the program to conduct activities in the areas of community outreach, neurotrauma education and awareness, and registry development, and to update the neurotrauma website. Partnerships and collaboration with public and private entities involved in neurotrauma related activities are important to prioritize and implement key activities that support individuals with neurotrauma and their family members.

- **NT Summer Institute** as indicated in Attachment II, the DOH has budgeted \$50,000 to conduct planning for a 2016 NT Summer Institute. The funding is necessary to contract with an organization that is familiar with developing an educational program for professional development in the area of neurotrauma as well as incorporating strand of educational and awareness activities that support survivors of neurotrauma and their families. In addition to professional development and support to survivors and family members, this summer institute is an opportunity to showcase the DOH's accomplishments through the use of the NSF as well as the accomplishments of its past and current contracted providers.

**NEUROTRAUMA ADVISORY BOARD**

Chapter 321H-3, HRS

**VOTING MEMBERSHIP**

**TERM REPRESENTATION**

VACANT

Neurotrauma Injury Survivor/Spinal  
Cord Injury

Lyna Burian

Brain Injury Association of Hawaii

Angie Enoka

Neurotrauma Injury Survivor/Traumatic  
Brain Injury

VACANT

STBIAB Chairperson

VACANT

Private Sector

Sally Jones, R.N.  
Queen's Trauma Center  
Queen's Medical Center

Trauma Center

Ian Mattoch, Esq.

Private Sector

Alan Parker  
Executive on Aging  
Hawaii County Office of Aging

At-Large

Scott Sagum

Stroke Survivor

Stella Wong  
Vice President  
Elderly Services Programs  
Catholic Charities of Hawaii

At-Large

Valerie Yamada

At-Large

## Attachment II

### Projected Budget for the Neurotrauma Special Fund FY 2015

Beginning Cash Balance as of 7/1/14	\$ 2,228,553
Estimated Revenues FY 2015	\$ 830,000
<u>FY 15 Estimated Expenses</u>	
Contract Encumbrances	
1. University of Hawaii – Manoa Concussion Management Project	\$ 270,973
2. Neurotrauma Registry	\$ 320,321
3. Hawaii Health Information Corporation- Purchase Neurotrauma Data	\$ 35,000
4. Web Design & Maintenance	\$ 6,500
5. Neurotrauma Summer Institute (Planning)	\$ 50,000
Education/Awareness Activities	\$ 50,730
Administrative Expenses	\$ 46,000
Personnel	\$ 100,000
Total Expenses	<u>\$ 879,524</u>
Estimated Ending Cash Balance as of 6/30/15	\$ 2,179,029