



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P.O. Box 3378  
Honolulu, HI 96801-3378

In reply, please refer to:  
File:

**NEUROTRAUMA ADVISORY BOARD (NTAB)  
MEETING MINUTES  
APRIL 22, 2016**

Present: Lyna Burian, Rita Manriquez, Ian Mattoch, Scott Sagum, Stella Wong, Valerie Yamada

Excused: Angie Enoka, Milton Takara, Doris Warner

Others: Dylan Arrieta, Pacific Disabilities Center (PDC) Hawaii Neurotrauma Registry (HNTR); Sean Cho, PDC, HNTR; Violet Horvath, Director, PDC, HNTR; Nathan Murata, Chair-Kinesiology and Rehabilitation Science University of Hawaii-Manoa; Cora Speck, Queen's Medical Center, Molly Trihey

DOH Staff: Wendie Lino, Community Alternatives Section Supervisor; Curtis Inouye, Neurotrauma

- I. **Call to Order** – Meeting was called to order at 1:40 p.m. by Acting Chair Scott Sagum. Quorum present.
- II. **Approval of Minutes from the December 18, 2015 meeting** – Board Member Stella Wong made a motion to accept the minutes as written. Board Member Ian Mattoch seconded that motion. All Board Members present voted in favor of minutes being accepted as written. No questions or discussions.
- III. **Review of Agenda** – Board Member Stella Wong made a motion to accept the agenda as written. Board Member Lyna Burian seconded that motion. All Board Members present voted in favor of accepting the agenda as written. No questions.

**IV. New Business**

- A. University of Hawaii Kinesiology and Rehabilitation Science Contract Proposal-Dr. Nathan Murata, Professor and Chair of the Kinesiology and Rehabilitation Science Department at the University of Hawaii-Manoa provided an overview of a project proposal to the Neurotrauma Board relating to educating school-aged children and students on the seriousness of head (concussions), neck and spinal cord injuries. Project HEAD, NECK, SPINE is an estimated 3 year project aimed at delivering, piloting, and launching head, neck, spinal cord related health and safety protocols for school-aged children and students. Utilizing information and data generated from the Hawaii Concussion Management Program, currently in the final year of the contract with the DOH, and evidenced based practices currently occurring in other parts of the country, the proposed project will educate and provide awareness on signs and symptoms of head injuries and concussions, recognition of possible neck and spinal cord injuries, and how to assist when someone sustains either a Head, Neck or Spine injury. The proposed project will utilize a web-based learning module for classroom teachers in the public schools to implement. Each identified grade level will have a set of developed modules with several lessons developed for each module. Per Mr. Murata, the first year of the proposed project will begin with the learning module for the eighth graders followed by the fifth graders in the second year and the third graders in the third year. Each module and subsequent lesson plans will be aligned with the Hawaii Content and Performance Standards III for Health. Classroom teachers will be able to access these modules via a web-based platform. Per Mr. Murata, the platform will be developed with the assistance of a course design consulting group. A parent component will also be integrated into the project. Once a child begins a module and does all the work, there will be a component that will link this information to the parent and in turn the parent will have some responsibility in overseeing the completion of the module. Mr. Murata mentioned that the learning resource module will assist teachers in the Department of Education (DOE) in implementing health education. Much of the information is connected to the strategic plan of the DOE relative to their health related standards. In response to a question from Board Member Stella Wong regarding cost of the project, Mr. Murata mentioned that the cost of the project for the first year would be in the range of \$250,000. The biggest portion of the cost in the first year will be developing the web-based module. Mr. Murata and his colleagues will provide the content materials for the web-based modules. Mr. Murata mentioned that the cost per year for the remaining years of the contract will be less. Acting Chair Scott Sagum and Kauai representative Rita Manriquez mentioned that this is a positive approach to education and awareness on neurotrauma injuries in addressing the school-aged children but will also educate the parents and families on the effects of neurotrauma injuries. A copy of the project proposal will be attached to these Minutes for Board Members to review and provide recommendation(s) to the DOH on the proposed project at the next NTAB meeting.
- B. Neurotrauma Strategic Plan-The Department of Health/Developmental Disabilities Division/Community Resources Branch will be developing a Strategic Plan for Neurotrauma Supports. Goals and Objectives will need to be developed for possibly a three year plan. Wendie Lino, DOH staff reported that a

neurotrauma strategic planning committee will be formed to assist the DOH in developing this plan. Per Ms. Lino, a request was made to have representation from the NTAB as member(s) of this committee. Board Member Stella Wong mentioned that having NTAB Member(s) on this committee would be most beneficial in that Board Members represent different sectors of the community. Once committee members are identified, a community venue needs to be selected. The DOH will then hold community meetings where individuals with neurotrauma injuries and their families as well as individuals from the community can provide feedback regarding neurotrauma issues and concerns. Cora Speck from the Queen's Medical Center (QMC) mentioned that QMC has conducted similar events at the Queen's Conference Center, which is a great location for a venue but they are currently going through renovations to include video conferencing and could possibly be a site in the future. Per Ms. Lino, video conferencing is an important factor in developing a strategic plan for Neurotrauma in that it will provide input and feedback from the neighbor islands. Ms. Horvath also mentioned that the John A. Burns School of Medicine (JABSOM) may be a possible site to conduct these meetings and is equipped with video conferencing. Board Member Stella Wong mentioned that as part of the strategic planning process, it would be a good idea to have the committee members discuss and develop plans prior to these community meetings. At the meetings, concerned individuals from the community and neighbor islands would be able to comment and provide feedback on the committee's plans. Per Ms. Wong, it is more practical to broaden the scope of the plans per comments from the community rather than having to narrow the scope from a general list of comments or feedback. Board Member Ian Mattoch mentioned that getting information and feedback from outside the State and bringing that information to Hawaii is also helpful. Cora Speck also mentioned that the DOH could contact other States and discuss their Neurotrauma strategic plan or similar plans. The DOH will be in contact with NASHIA (National Association of State Head Injury Administrators) to discuss and hopefully to receive assistance in addressing the developing of a strategic plan. In summary of these discussions, Ms. Wong mentioned that the DOH will form a committee to develop a Neurotrauma Strategic Plan. The committee will include members of the community including NTAB Members interested in being part of the committee. After the plan is completed, the NTAB will then look at the Board's roles and functions on ways to address the goals and objectives developed in the plan. A progress report on the plan will be an agenda item at future NTAB meetings. Acting Chair Scott Sagum has volunteered to be a member of this committee. As discussed, a procedure on receiving a request for use of the Neurotrauma Special Funds and awarding of contracts should be a part of the strategic plan.

## **V. Old Business**

- A. Hawaii Concussion Awareness and Management Program (HCAMP) Update: Mr. Murata provided a report summary ending on March 31, 2016. Completed baseline totals at this time are 8622 with a total of 920 concussions reported. Football continues to be the sport with the highest reported concussions and girls judo continues to be the sport with the highest rate of reported concussions. Mr. Murata reported that the data summary at this time is very similar to data

reported at the same time last year. Mr. Murata also reported on the status of Senate Bill 2557. This Bill relating to concussions expands the concussion education program established under Act 197, Session Laws of Hawaii 2012, (HCAMP) and incorporates additional concussion protocol program requirements, appropriate funds to develop and implement the concussion monitoring and education program for school athletics and youth athletic activities, administer concussion testing to high school athletes and implement a concussion awareness program for youth athletics. Currently, the conference committee will reconvene on April 27, 2016. If the Bill passes, Mr. Murata mentioned that Hawaii will lead the country in continuing what they have accomplished through HCAMP, high school and youth athletics and thanked the NTAB for supporting their efforts over the past 5-6 years. Refer to the HCAMP report which is attached to the Minutes for additional information.

- B. Pacific Disabilities Center (PDC) – Hawaii Neurotrauma Registry (HNTR) Update. Violet Horvath, Director of the PBRRTC/HNTR Project provided highlights on the registry. Ms. Horvath mentioned there are a total of 143 unique participants in the Registry as of March 31, 2016. HNTR had provided outreach to more than 13,000 members of the public at events and over 1,000 professionals and community members at presentations since March 21, 2013. HNTR has provided over 19,000 pieces of neurotrauma educational materials to the public since March 21, 2013. HNTR has also added handouts on pedestrian safety and a flyer on the HNTR social media into their information packets. PDC has also assisted the Brain Injury Association of Hawaii with the Hawaii Brain Injury Awareness Day Proclamation. In regards to social media and marketing update, Ms. Horvath was a guest on the Gary Galihier Law Hour radio show with Mike Buck as host. A PSA on concussion was submitted to ‘Olelo for broadcast as a short four minute video but was returned to HNTR to be redone with soundbites. It was originally done in sign language. Taping for a second and third television PSA on stroke, spinal cord injury and traumatic brain injury took place in early March, 2016 with post-production beginning soon. Board Member Valerie Yamada is a volunteer participant in one of the PSA’s. Taping of an on-demand stroke webinar and post production is nearly complete. Per Ms. Horvath, the stroke webinar will provide basic stroke information and will help individuals understand stroke prevention, risk factors, symptoms of a stroke and what to do when someone has a stroke. Data entry and analysis for contract year 2 is complete with statistical analysis to follow. Ms. Horvath also mentioned that they will now be able to merge the data sets from year1 and year 2 and look at different variables together in groups. Ms. Horvath also mentioned an idea she had regarding a rehabilitation coloring book for individuals 13 years of age and older. She mentioned that coloring reinforces ways to take care of one’s self after a neurotrauma injury and allows for practice of manual dexterity. Parents with children under the age of 13 can color together and go over the messages. Per Ms. Horvath, research has shown that in adults, coloring has a stress relieving effect. Rita Manriquez from Kauai mentioned that she received an adult coloring from a friend who says that coloring is a great stress reliever. For additional information, please refer to the HNTR report which is attached to the Minutes.

Ms. Horvath also provided an update on the 3 proposed projects she reported on at a previous NTAB meeting. The first is on a children's book on traumatic brain injury and the accompanying coloring book. A graphic artist will be assisting PDC with this first project. The second proposed project addresses critical skills for transition age youths with mild traumatic brain injury. PDC has developed a flyer with information for interested individuals to contact PDC. This would provide PDC with a list of interested individuals. Flyers have been distributed at a YMCA event at Bishop Museum and PDC have received feedback. The third proposed project is a documentary on individuals who have sustained a neurotrauma injury in Hawaii and what their lives were like before the injury and post injury. Ms. Horvath will provide additional updates on the proposed projects at the next NTAB meeting.

C. Neighbor Island Activities – Kauai: Kauai representative Rita Manriquez mentioned that during the Mayor's Advisory Board for Equal Access meeting, the Mayor thanked everyone who gave their time and effort in addressing the Board's goals. The Mayor was also able to get a proclamation recognizing their efforts. Mr. Sagum also mentioned that on Kauai, the Surfer's Myelopathy awareness and training sessions are being done monthly. It continues to do well and positively received from the attendees. Mr. Mattoch also mentioned that there have been reported cases of surfer's myelopathy on the island of Oahu and Maui.

D. DOH Update – The Community Resources Branch has gone through interviews to hire for the Neurotrauma position. Per Ms. Lino, an applicant has been recommended for the position and the Branch is awaiting her response. The other Neurotrauma position is unfilled.

## VI. Announcements

### A. Brain Injury Association of Hawaii

#### 1) *Support Group and Educational Meetings*

- a. First Saturdays, 1:00-3:00 p.m., Rehabilitation Hospital of the Pacific, Wo Conference Room #4.
- b. 2<sup>nd</sup> and 3<sup>rd</sup> Wednesdays, 6:00-8:00 p.m., Rehabilitation Hospital of the Pacific, Wo Conference Room #4
- c. Chess and Game Club (board games) last Wednesday's of every month from 6:00-7:30 p.m., Weinberg Lanai at the Rehabilitation Hospital of the Pacific. Please call Rochelle Brace at 566-3791 if interested in participating.

## VII. Next Meeting:

Date: June 24, 2016

Location: Kalanimoku VCC and Neighbor Island Sites  
Time: 1:30 p.m. to 4:00 p.m.

Motion was made to adjourn meeting by Board Member Stella Wong and seconded by Board Member Ian Mattoch. Meeting Adjourned at 3:30 p.m.



UNIVERSITY  
of HAWAII®  
SYSTEM

**Hawai'i Neurotrauma Registry Project (HNTR) Report  
For Neurotrauma Advisory Board (NTAB)  
April 22, 2016 1:30 p.m. – 4:00 p.m.  
Period covered: December 2015—March 2016**

**Highlights:**

1. Total of 143 unique participants in the Registry as of March 31, 2016
  - a. Outreach to more than 13,000 members of the public at events and over 1,000 professionals and community members at presentations since March 21, 2013
  - b. Over 19,000 pieces of neurotrauma educational material distributed since March 21, 2013
  - c. Many, many thanks to Rochelle Brace and Abi Leddy (and anyone else there who has helped) at the Rehabilitation Hospital of the Pacific for their assistance in recruiting people into the Registry
  - d. Recently added to information packets: Handouts on pedestrian safety and half-page flyer on HNTR social media
2. Brain Injury Awareness Month
  - a. HNTR Newsletter
  - b. Assisted BIA-Hawaii with Hawaii Brain Injury Awareness Day Proclamation
3. HNTR Advisory Board
4. Social media and marketing update
  - a. Project Director was a guest on the radio show Gary Galiher Law Hour with Mike Buck as host
  - b. A PSA on concussions has been approved by DOH and submitted to 'Ōlelo for broadcast as a short video (4 minutes)
  - c. Taping for a second and third television PSA on stroke, spinal cord injury, and traumatic brain injury took place in early March 2016; post-production will begin soon

- d. Taping of an on-demand stroke webinar was completed in March 2016, and post-production is also nearly complete
- 5. Data entry and analysis for Contract Year 2
  - a. Data entry is complete and statistical analyses are beginning
- 6. Idea: Rehabilitation coloring books for ages 13+
  - a. Reinforces ways to take care of one's self after a neurotrauma injury and allows for practice of manual dexterity
  - b. Parents with children under the age of 13 can color together and go over the messages
  - c. Research has shown that, in adults, coloring has a stress-relieving effect

**Hawai'i Neurotrauma Registry Update**

**Table 1: Dashboard Report through March 31, 2016**

Item	Total through January 2016	February 2016	March 2016	Grand Total
<b>Registry Participation</b>				
Number of unique participants in HNTR Registry	131	9	3	<b>143</b>
<b>Public Education</b>				
Public events attended by HNTR staff and volunteers	77	0	4	<b>81</b>
Number of individuals who visited HNTR tables at public events	13200	0	301	<b>13501</b>
Number of HNTR brochures distributed	12746	0	333	<b>13079</b>
Number of HNTR business cards distributed (incl. trivia cards)	4062	0	12	<b>4074</b>
Neurotrauma educational materials distributed	18815	0	333	<b>19148</b>
Number of volunteers assisting with public events (duplicated count)	108	0	0	<b>108</b>
<b>Networking with Professionals</b>				
Presentations about HNTR to professionals / community	42	2	1	<b>45</b>
Number of professionals / community members who attended HNTR presentations	1010	65	9	<b>1084</b>
Networking contacts made with partners / collaborators	245	2	1	<b>248</b>
Events / presentations in conjunction with partners / collaborators	29	1	1	<b>31</b>
<b>Media</b>				
Print articles	8	0	0	<b>8</b>
Print ads	16	0	1	<b>17</b>
HNTR newsletters (effective October 29, 2014)/eCards	4	0	1	<b>5</b>
Distribution (Number of subscribers)	413	0	-8	<b>405</b>
Radio PSAs/Interviews	1445	1	0	<b>1446</b>
TV PSAs (post-production status)	1	0	3	<b>4</b>
TV programs, appearances, or ads (duplicated count/broadcast)	18	0	0	<b>18</b>
Social media following (Facebook effective July 16, 2014)	37	0	1	<b>38</b>
Facebook Posts	70	4	2	<b>76</b>
Facebook Friends/Following	35	1	1	<b>37</b>
Twitter Posts (effective October 31, 2014)	24	4	3	<b>31</b>
Twitter Following (effective October 31, 2014)	2	0	0	<b>2</b>
YouTube Hits (effective February 23, 2015)	126	14	57	<b>197</b>

<b>Information and Referral</b>				
Number of information / referral contacts with individuals	334	20	23	<b>377</b>
Number of information / referrals provided to individuals Range: 1 – 5 pieces of information / referrals per contact Average: 2.07 pieces of information / referrals per contact	709	44	40	<b>793</b>
<b>Volunteers/Trainings</b>				
Number of volunteer trainings held	20	0	0	<b>20</b>
Number of persons attending trainings (duplicated count includes HNTR volunteers and others)	100	0	0	<b>100</b>
Number of new volunteers recruited to help with HNTR	14	0	0	<b>14</b>

### **Goal 1: Develop and administer a voluntary NT Registry**

In Year 1, (March 21, 2013 – March 20, 2014) 41 people joined the Registry. There were 57 new participants in Year 2 (March 21, 2014 – March 20, 2015). There were 45 new people who took the survey in Year 3 of the contract (March 21, 2015 – March 20, 2016). There were three new persons who joined the Registry in March 2016 at the beginning of Year 4. The total number of unique registry participants at the conclusion of Year 3 is 143.

There are 126 (88%) complete surveys and 17 that are incomplete. There are more women (n=78, 55%) than men (n=64, 45%). The vast majority (n=125, 87%) reside on Oahu, with 12 in the Registry from Hawai'i, 5 from Maui, and 1 from Kauai. Most participants (n=107, 75%) list traumatic brain injury (TBI) or some other form of brain injury as their first, second, or third neurotrauma injury. The next most reported injury is, specifically, ischemic stroke (37, 26%), followed by hemorrhagic stroke (22, 15%), followed by spinal cord injury (21, 15%). Five people did not list the nature of their injury. One new participant does not have a neurotrauma injury. There are 46 people in the Registry who have had two or more neurotrauma injuries (33%).

There were four referrals to the Registry from family and friends, one by a physician/hospital/clinic, and two referrals by others. Three found out from Generations magazine, one from the HMSA Island Scene article, one from the Hawaii Wellness Directory, and seven from a newspaper/newsletter. Five heard it on the radio and one said television. Twelve listed table at a public event and one from Google. Fifteen checked presentation as how they heard, with one from Pacific Head Injury Support Group, three from Brain Injury Association of Hawaii, one from Hawaii Adult Day Care Center, one from Department of Aging, and fourteen from Rehabilitation Hospital of the Pacific.

## **Develop an Advisory Board of Stakeholders**

As reported in 2015, the HNTR Advisory Board is being reconfigured for a variety of reasons. Two current members were asked to remain. One past member (SCI survivor on Oahu) agreed to continue. The only other past member who was invited back declined (UH Manoa academic).

The new invitees include a survivor on Hawai'i, a service provider on Maui, and three neurotrauma specialists on Oahu. In addition, Mr. Gary Galiher of Galiher DeRobertis Waxman is willing to serve on the board. He has been an advocate for persons with brain injury and spinal cord injury. Either he or one of his associates will attend meetings.

All invitations to new members have gone out. Those who have agreed to join are a physician/survivor on Hawaii Island, and a physician on Oahu. Two other physicians were invited. However, one is moving, and the other has not responded. We are waiting for a response from the other new invitee, a service provider on Maui.

So, currently, we have four Advisory Board members and seek at least one more.

## **Statewide Recruitment Plan**

Staff is focusing on recruiting children of all ages and Neighbor Islanders into the Registry. Efforts are underway to contact our network for private schools to present to parents and students on brain injury, stroke, or spinal cord injury and recruit for the Registry. Contact with Kamehameha Middle School was initiated in January 2016.

## **Provide Community Outreach**

There were no events in December 2015. Three community outreach efforts took place in January 2016, two in February 2016, and four in March 2016. We are focused on scheduling more presentations to groups, which is proving to be an effective recruiting method. We are also looking for new and different public events to attend, including in different locations than where we have been to before, to broaden the audiences we reach.

### Completed:

- January 15, 2016, Kamehameha Middle School Health Fair
- January 19, 2016, Stroke Presentation at Moiliili Community Center for Lanakila Group Dining seniors
- January 27, 2016, Department of Transportation Civil Rights Symposium on Customer Service for Persons with Disabilities
- February 2, 2016, Stroke Club at Rehabilitation Hospital of the Pacific
- February 23, 2016, Stroke Presentation for Lanakila Group Dining seniors at Moiliili Community Center
- March 1, 2016, HNTR at Stroke Club, Rehabilitation Hospital of the Pacific
- March 5, 2016, Papakolea Ohana Health Fair, Lincoln Elementary

- March 12, 2016, AARP Caregiver Workshop, Mililani
- March 19, 2016, KELII 3<sup>rd</sup> Annual Special Abilities Family Social, Kapolei High School

#### Current Month and Future:

- April 2, 2016, AARP Caregiver Conference, Japanese Cultural Club
- April 5, 2016, Stroke Club, Rehabilitation Hospital of the Pacific
- April 8, 2016, Stroke Presentation at Hale Mohalu in Pearl City, Lanakila Pacific Group Dining seniors (approximately 20)
- April 9, 2016, YMCA Kids Health Fair, Bishop Museum
- April 16, 2016, Annual SPIN Conference, UH Mānoa
- April 20, 2016, Stroke Presentation, Pohulani (Lanakila Pacific Seniors)
- April 22, 2016, Ewa Kupuna Safety Fair, Mahiko Gym, Ewa Beach
- April 26, 2016, SCI Presentation, Moilili Community Center for Lanakila Pacific Group Dining seniors (approximately 40)
- April 26, 2016, Hawai'i Afterschool Alliance Annual Summit, Hawai'i Convention Center
- May 3, 2016, Stroke Fair at Rehab Hospital of the Pacific
- June 8, 2016, BI Presentation at Seicho No Ie Jisso Center in Kahalu'u for Lanakila Pacific Group Dining seniors (Kailua, Kahalu'u, Hau'ula) (approximately 25)
- June 18, 2016, Eighteenth Annual Celebrating Father's Day at Windward Mall
- June 25, 2016, ESPN Sports Festival at NBC Exhibition Hall
- July 20, 2016, Stroke Presentation for Living Skills Workshop for Japanese Seniors in Hawaii, Honolulu
- October 2, 2016, Children & Youth Day

#### **Establish and Maintain Collaboration and Partnerships**

Rochelle Brace of the Stroke Club at Rehabilitation Hospital of the Pacific is very enthusiastic about Stroke Club members volunteering for HNTR PSAs. She referred the project to Sheri Salvador, the Marketing Manager and contact person at Rehabilitation Hospital of the Pacific. PDC hopes that some kind of collaboration or partnership can be initiated through its video project proposal.

Lanakila Pacific Group Dining Program continues to increase opportunities to recruit seniors into the registry.

#### **Provide and Document Information and Referral**

During December 2015, no I&R was provided. During January 2016, six persons contacted the Project Coordinator and 10 items of information or referral were provided. There were 20

requests for I&R and 44 items of information during February 2016. Finally, there were 23 contacts for I&R and 40 items of information during March 2016.

## **Goal 2: Develop and disseminate an effective PSA and social media campaign**

### **☒ Ōlelo Community Media**

We are waiting for a message from Ōlelo as to when Dr. Cifu's lecture on "Battlefield to Ball Field: An Integrative Approach to Traumatic Brain Injury" would be replayed. Initially it was shown on Sunday, January 10, 2016 at 7:00 PM on Channel 54.

### **Publicity Campaign**

A bus placard campaign is being planned that would cover the entire fleet.

An article (question-and-answer style) title "March is Brain Injury Awareness Month" was submitted to Midweek for publication. However, they were unable to run it in March. A change was made to the title so it no longer references March of Brain Injury Awareness. The revised article is being resubmitted to Midweek.

### **YouTube**

Current number of views

- TBI segment: 61
- Stroke segment: 24
- Community Matters radio interview: 66
- KSSK promo: 14
- Battlefield to Ball Field / Dr. Cifu: 32

## **Head, Neck & Spine Injuries: Safety Awareness and Education**

### **Project HEAD, NECK, SPINE**

#### Overview

Project **HEAD, NECK, SPINE** is an online educational resource aimed to educate school-age children and students on the seriousness of head (concussions), neck and spinal cord injuries. More specifically, Project **HEAD, NECK, SPINE** is an estimated three-year project aimed at developing, piloting, and launching head, neck and spinal cord related health and safety protocols for school-aged children and students. **HEAD, NECK, SPINE** consists of approximately 6 modules with 6-7 lessons per module. Modular topics include (but not limited to): head injuries sustained by children/students, signs and symptoms of head injuries and concussions, recognition of possible neck and spinal cord injuries, and how to assist when you know someone sustains either a **HEAD, NECK** or **SPINE** injury. Each lesson will be approximately 15-20 minutes with a formative evaluation mechanism embedded as well as a formative evaluation at the end of the modules. The following grades will be targeted for intervention, pilot testing, development and launch: 3<sup>rd</sup> grade, 5<sup>th</sup> grade, 8<sup>th</sup> grade, and 11<sup>th</sup> grade.

Each module and subsequent lesson plans will be aligned with the Hawaii Content & Performance Standards III for Health. More specifically the following standards will be addressed:

**Standard 1:** Students will comprehend concepts related to health promotion and disease prevention to enhance health.

- Promote Safety and Prevent Unintentional Injury and Violence

**Standard 3:** Students will demonstrate the ability to access valid information and products and services to enhance health.

**Standard 4:** Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

**Standard 8:** Students will demonstrate the ability to advocate for personal, family, and community health.

Classroom teachers will be able to access these modules via a web-based platform. The web-based platform will be developed by this project in collaboration with the College of Education (COE) Distance Course Design & Consulting (DCDC) <https://dcdc.coe.hawaii.edu/>. The DCDC is part of the Technology and Distance Education Program within the COE. *Their mission is design compelling digital experiences that connect learners and empower instructors.* Specifically, DCDC will be sub-contracted to provide the following support: multimedia (video and web programmers) and instructional designer. Their responsibilities will include (but not limited to) the following: assist with the development, management, instructional support, trouble shooting of online modules for the project. Built within this system includes formative and summative evaluations, parent involvement, development of style and pacing of each lesson, and development of a teacher and parent guide in Year 2.

#### Scope of Services

The Center for Disease Control (CDC) estimates that there are 300,000 head injuries (i.e., concussions) annually. The amount of neck and spinal cord injuries has also contributed to the overall increase particularly with males

([https://www.nscisc.uab.edu/PublicDocuments/fact\\_figures\\_docs/Facts%202012%20Feb%20Final.pdf](https://www.nscisc.uab.edu/PublicDocuments/fact_figures_docs/Facts%202012%20Feb%20Final.pdf)). According to the American Academy of Orthopaedic Surgeons (ASOS) back and neck pain is the most common physical complaint requiring medical care and leading cause of time away from work. The fact remains that there is a relationship between the head, neck and spine.

In Hawaii, the Hawaii Concussion Awareness & Management Program (HCAMP) has provided high schools within the state of Hawaii with baseline cognitive testing for concussion prior to the start of their season. In addition to baseline testing, an education component was developed to educate community groups, youth organizations, and childcare facilities. Data generated since the inception of HCAMP showed baseline testing to average 9500+, and reported 1000 concussions. Data have been consistent for the past few years. Despite the rather stability of concussion reporting across the state, the impact of a head injury can also influence the neck and spinal cord. While spinal cord injuries have decreased in sports over time, injuries from accidents, falls, violence, vehicle accidents, and others have increased. **Project Head, Neck, Spine** is an effort to bring educational knowledge and awareness to students in various grades throughout the state. The Department of Kinesiology and Rehabilitation Science (KRS) houses the Hawaii Concussion Awareness and Management Program (HCAMP) and therefore is a logical extension in managing, overseeing and evaluating **Project Head, Neck, Spine**.

#### Goal of the Service

The University of Hawaii at Manoa (UHM), Department of Kinesiology and Rehabilitation Science (KRS) shall develop an online educational resource modules focusing on head, neck and spinal cord injuries for 3<sup>rd</sup>, 5<sup>th</sup>, 8<sup>th</sup>, and 11<sup>th</sup> graders statewide.

#### Specific Outcomes

1. Develop the content and online health education module, focusing on head injuries, neck and spine injuries, recognition, awareness and education for grades 3, 5, 8, and 11 (HCPS Health Standard 1).
2. Provide related resources to have teachers and students access available information on head injuries, neck and spine injuries, health and safety issues (HCPS Health Standard 3).

3. Demonstrate content knowledge (head injuries, neck and spine injuries, signs/symptoms, seeking assistance) by completing online formative and summative evaluations at 80% accuracy.
4. Demonstrate appropriate skills by recognizing signs/symptoms, understanding when to call for assistance, provide guidance to peers, parents and family during and after school hours (HCPS Health Standards 3 & 4)
5. Online head injuries, neck and spine injuries, awareness & education, and programming modules will be marketed to other schools and sites.

#### Service Activities

A. The CONTRACTOR shall develop the content and online health education module, focusing on head injuries, neck and spine injuries, recognition, awareness and education for grades 3, 5, 8, and 11 (HCPS Health Standard 1).

- 1) In year one, modules and associated lessons will be developed that focus on head, neck and spinal cord injuries. Twenty-five percent (12) middle school 8<sup>th</sup> grades will be selected by the CONTRACTOR to participate in beta testing of modules and lessons. Contents will include signs and symptoms of head injuries, recognition of neck and spinal cord injuries, simple “what to do next” steps, and some prevention measures.
- 2) In year two, there will be a full launch at all 8<sup>th</sup> grade schools willing to try this online resource module. Development of content and related information for 5<sup>th</sup> graders. Beta testing will also occur with 5<sup>th</sup> grade classes (25%) randomly recruited statewide.

- 3) At the end of Year 1, Classroom teachers will provide feedback on the feasibility and efficacy of the online resource modules.

*Year One Deliverables.* Develop and pilot testing for 8<sup>th</sup> grade health (or physical education) teachers on the implementation of this module. There are approximately 50 middle and intermediate schools statewide. It is anticipated that at least (25% of the 50 schools statewide) will have access as part of this initial year final.

- B. Provide related resources to have teachers and students access available information on head injuries, neck and spine injuries, health and safety issues (HCPS Health Standard 3).

- 1) During Year 1, the CONTRACTOR shall: (1) provide a database of resources for teachers and parents to view; (2) make accessible all resources via website; and (3) be able to work collaboratively on their child's online module.

*Year One Deliverables.* Classroom teachers will have access to content and resources as related to head, neck and spine injuries.

- C. Demonstrate content knowledge (head injuries, neck and spine injuries, signs/symptoms, seeking assistance) by completing online formative and summative evaluations at 80% accuracy.

- 1) The CONTRACTOR shall (1) develop formative evaluations via module lessons and module summative evaluations; (2) communicate evaluation data with classroom teachers and parents; and (3) measure outcomes with Hawaii Content and Performance Standards III

- 2) Develop, pilot test and implement a pre- and post- survey to obtain baseline understanding of head, neck and spinal cord injuries (e.g. signs, symptoms, causes, recovery, etc.) and measure the effectiveness of the online modules via parent and classroom teacher self-report questionnaires.

*Year One Deliverables.* 8<sup>th</sup> graders will be able to demonstrate at least 80% competency on specific head, neck and spinal cord injuries via both formative (module end evaluation) and summative (unit end).

- D. Demonstrate appropriate skills by recognizing signs/symptoms, understanding when to call for assistance, provide guidance to peers, parents and family during and after school hours (HCPS Health Standards 3 & 4)

- 1) The CONTRACTOR shall (1) build into each module appropriate follow-up protocol to inform parents, friends and care givers of possible injury; and (2) communicate the importance of follow-up and follow through of support.

*Year One Deliverables.* 8<sup>th</sup> graders will be able to recognize signs/symptoms, who to call for assistance, positively interact with peers and family via an online module.

- E. Online head injuries, neck and spine injuries, awareness & education, and programming modules will be marketed to other schools and sites.

- 1) The CONTRACTOR shall (1) market the online resource modules to all targeted schools and grade levels; and (2) include all private and parochial schools.

*Year One Deliverables.* Fully launch 8<sup>th</sup> grader Head, Neck, Spine Units to all 8<sup>th</sup> grade teachers statewide. Begin to address the content and information for 5<sup>th</sup> graders for Year Two.

- F. Schedule quarterly meetings with the DDD and submit to the DDD an annual report covering the first twelve (12) months of the contract that includes, but not limited to, progress on the following: 1) Schools recruited at specific grade levels; 2) number of students impacted; 3) outcome of online module [feedback from teachers]; and 4) measures compared to HCPS III Health Standards.
- G. Provide monthly updates to either the State Traumatic Brain Injury Advisory Board or Neurotrauma Advisory Board.
- H. Submit a final report at the conclusion of the contract that includes analysis of all data and findings and recommendations.
- I. Compliance with applicable provisions of the Health and Insurance Portability and Accountability Act of 1996 (“HIPAA”) is the responsibility of the CONTRACTOR. The CONTRACTOR shall take appropriate measures to protect the confidential information of its teachers, students and parents.

**Evaluation Section** <Please see Logic Model>

Project staff will work on specific content for grade 8 during the first year of implementation.

Topics include (but not limited to): recognition of signs and symptoms of a head injury (i.e., concussion), neck and spine injuries (i.e., limited movement upon injury, contacting appropriate personnel); importance of physical rest and limited mobility in suspected neck and spinal cord injuries; communication with parents, teachers, Primary Care Physicians, family and friends.

During Year 2, full launch is anticipated for 8<sup>th</sup> graders and the development of content for 5<sup>th</sup>

graders. Year 3 will have the full launch for 5<sup>th</sup> graders, and the development of content for 3<sup>rd</sup> graders. Year 4 is the full launch for 3<sup>rd</sup> graders and development for 11<sup>th</sup> graders. Specific time schedule follows:

**Time Schedule (Projected)**

<b>MONTH/YEAR</b>	<b>GOAL</b>
August 2016	Coordinate working team, DCDC, KRS, DOE
August 2016	Begin online content development for 8 <sup>th</sup> graders
Mar 2017	Pilot test content and online module with 8 <sup>th</sup> graders
July 2017	Launch module with 8 <sup>th</sup> graders
August 2017	Begin online content development for 5 <sup>th</sup> graders
March 2018	Pilot test content and online module with 5 <sup>th</sup> graders
July 2018	Launch module with 5 <sup>th</sup> graders
August 2018	Begin online content development for 3 <sup>rd</sup> graders
Mar 2019	Pilot test content and online module with 3 <sup>rd</sup> graders
July 2019	Launch module with 3 <sup>rd</sup> graders
August 2019	Begin online content development for 11 <sup>th</sup> graders
March 2020	Pilot test content and online module with 11 <sup>th</sup> graders
July 2020	Launch with 11 <sup>th</sup> graders

**Program: Project Head, Neck and Spine Injuries, Awareness, Education and Programming - LOGIC MODEL**

**Project Goal:** To develop an online web-based health education module specifically addressing injuries associated with head, neck and spine for school-aged children and students

Inputs	Activities	Outputs	Outcomes – Impact		
			<i>Short</i>	<i>Medium</i>	<i>Long</i>
<p>Kinesiology and Rehabilitation Science (KRS) department</p> <p>Hawaii Concussion Awareness and Management Program (HCAMP)</p> <p>Distance Course Design &amp; Consulting (DCDC)</p> <p>Partnerships Department of Health (DOH)</p> <p>Department of Education (DOE)</p>	<p>Develop six Health Education Modules and 6 lessons per module</p> <p>Development includes topics as related to HCPS Health Standards 1, 3, &amp; 4.</p> <p>Develop online and web-based content Modules 1-6, and lessons for 5<sup>th</sup> graders Year 1</p> <p>Beta Test of Modules during Year 1. To include a minimum of 3 lessons per module for grade 5</p> <p>Begin to market to schools and teachers</p>	<p>KRS, DCDC, HCAMP DOE and DOH</p> <p>DCDC staff to include: multimedia web and video programmers</p> <p>KRS Project Manager and Chair</p> <p>DOH – Month and annual reporting destination</p> <p>DOE – collaborative partnership with educators and resource level personnel to valid content and standards.</p>	<p>Complete module 1 with at least 3 lessons on one topic</p> <p>5<sup>th</sup> grade Beta testing during Year 1. Beta testing to determine appropriateness of content and user friendliness</p> <p>Establish formative and summative evaluation procedures to evaluate and monitor progress. Make necessary changes to content if necessary</p> <p>Establish the working web-based platform is functional and ease of use by educators</p>	<p>Complete Modules 1-3 with at least 3 lessons per module</p> <p>Upon Beta testing completion launch Hi-CAEP for 5<sup>th</sup> graders to interested schools and teachers</p> <p>Monitor progress of content topics and adjust as necessary via summative evaluation after each module</p> <p>Market to 5<sup>th</sup> grade classrooms Oahu wide</p> <p>Launch web-based modules to Oahu 5<sup>th</sup> grade classrooms</p>	<p>Complete 6 modules with 6 lessons per module</p> <p>At least 25% of 8<sup>th</sup> grade teachers will utilize this Health Education resource in their classroom</p> <p>Evaluate project from classroom teachers and parents.</p> <p>Begin development of grade 3 modules</p>

**\*NOTE.** This logic model is only for Year 1 of a projected 4 year proposal.

SCHEDULE OF REIMBURSEMENT  
From the STATE'S Notice to Proceed for Twelve (12) Months

Requested Amount

<u>Service Activities</u>	<u>Allotment</u>
1. Personnel	\$110,000
2. Fringes	\$ 32,000
3. Travel	\$ 15,000
4. Consultation (DCDC Group, DOE)	\$ 98,000
5. Supplies	<u>\$ 10,000</u>
Sub-total	\$265,000
6. Indirect Cost (10%)	\$ 26,500
TOTAL	<u>\$291,500</u>

## Concussion Report for School Year 2015 - 2016

### Report Summary from 8/1/15 to 3/31/16

67 Schools	Total	BIIF	KIF	MIL	ILH	OIA
Number of Baselines	8622	1182	274	2018	1742	3406
Number of Concussions	920	73	51	83	189	524

1. 11/10/15, Oahu Soccer League Referees Meeting @ Waipahu HS
2. 1/13/16, Oahu Soccer League Coaches Meeting @ Japaness Chamber of Comm3
3. 2/13/16, Play Sports Football Coaches  
Junior Prep football
4. 2/13/16,
5. 4/21/16, Mililani Middle School



	Number of Concussion		
SPORTS	8/1/15 to 3/31/16		Total to date
Baseball (M)	25		
Baseball (F)	0		
Basketball (M)	25		
Basketball (F)	66		
Boating Related (M)	0		
Boating Related (F)	2		
Cheerleading (M)	3		
Cheerleading (F)	46		
Football (M)	276		
Football (F)	6		
Golf (M)	0		
Golf (F)	0		
Lacrosse (M)	0		
Lacrosse (F)	0		
Martial Arts (M)	19		
Martial Arts (F)	22		

rowing (M)	34		
Rowing (F)	61		
Soccer (M)	46		
Soccer (F)	33		
Softball	9		
Swimming (M)	1		
Swimming (F)	2		
Tennis (M)	4		
Tennis (F)	6		
Track & Field (M)	6		
Track & Field (F)	28		
Volleyball (M)	5		
Volleyball (F)	13		
Water Polo (M)	40		
WaterPolo (F)	22		
Wrestling (M)	27		
Wrestling (F)	12		
X-Country (M)	35		
X-Country (F)	35		
Others (M)	4		
Others (F)	12		
Rugby (M)	1		

925

BIIF	Number of Baselines 8/1/15 to 3/31/16	Number of Concussion		
		8/1/15 to 2/29/15	3/1/16-3/31-16	Total to date
School				
Hilo High School	173	13	8	21
Honokaa High School	167	9	2	11
Kamehameha Schools-Hawaii	152	7	0	7

Kau High School	24	4	0	4
Kea'au High School	185	1	1	2
Kealakehe High School	271	5	1	6
Kohala High School	50	1	0	1
Konawaena High School	156	10	1	11
Pahoa High School	1	0	0	0
Waiakea High School	3	7	3	10
<b>Total (10 Schools)</b>	1182	57	16	73

KIF	Number of Baselines 8/1/15 to 3/31/16	Number of Concussion		
		8/1/15 to 2/29/15	3/1/16-3/31-16	Total to date
School				
Kapaa High Shchool	89	13	3	16
Kauai High School	108	12	4	16
Waimea High School	77	15	4	19
<b>Total (3 Schools)</b>	274	40	11	51

MIL	Number of Baselines 8/1/15 to 3/31/16	Number of Concussion		
		8/1/15 to 2/29/15	3/1/16-3/31-16	Total to date
School				
Baldwin High School	178	6	6	12
Hana High School	39	1	1	2
King Kekalike High School	1546	16	2	18
Lahainaluna High School	79	14	2	16
Lanai High School		0	0	0
Maui High School	95	24	8	32
Molokai High School	81	2	1	3
<b>Total (10 Schools)</b>	2018	63	20	83

ILH	Number of Baselines 8/1/15 to 3/31/16	Number of Concussion		
		8/1/15 to 2/29/15	3/1/16-3/31-16	Total to date
School				
ASSETS School	43	1	3	4
Christian Academy	5	0	0	0
Damien High School	194	20	4	24
Hanalani School	31	4	0	4
Hawaii Baptist Academy	159	4	0	4
Honolulu Waldorf School	26	1	0	1
Iolani High School	307	15	0	15
Island Pacific Academy	28	3	0	3
Kamehameha Schools-Oahu	281	33	3	36
La Pietra Hawaii School	70	2	1	3
Lanakila High School	47	0	0	0
Le Jardin Academy	93	11	3	14
Lutheran High School	6	2	0	2
Mid-Pacific Institute	178	22	2	24
Pacific Buddhist Academy	13	1	0	1
Sacred Heart Academy	90	13	1	14
St. Andrews Priory	15	4	0	4
St. Francis	112	13	3	16
St. Louis School	3	9	3	12
University Lab High	41	7	1	8
<b>Total (21 Schools)</b>	<b>1742</b>	<b>165</b>	<b>24</b>	<b>189</b>

OIA	Number of Baselines 8/1/15 to 3/31/16	Number of Concussion		
		8/1/15 to 2/29/15	3/1/16-3/31-16	Total to date
School				
Aiea High School	80	12	6	18
Anuenue School	35	8	0	8
Campbell High School	135	30	5	35
Castle High School	213	18	5	23
Farrington High School	227	12	4	16
Kahuku High School	161	13	1	14
Kailua High School	116	14	3	17
Kaimuki High School	102	11	2	13
Kaiser High School	116	8	0	8
Kalaheo High School	173	25	8	33
Kalani High School	231	29	7	36
Kapolei High School	182	8	1	9
Leilehua High School	247	53	6	59
McKinley High School	202	22	7	29
Milliani High School	312	42	10	52

Moanalua High School	222	38	10	48
Nanakuli High School	102	4	0	4
Pearl City High School	150	22	11	33
Radford High School	144	20	3	23
Roosevelt High School	124	16	6	22
Waiialua High School	105	8	3	11
Waianae High School	1	6	1	7
Waipahu High School	26	6	0	6
<b>Total (23 Schools)</b>	<b>3406</b>	<b>425</b>	<b>99</b>	<b>524</b>