

PROJECT: HEAD, NECK, SPINE

Department of Health

Final Report 2023



College of Education
UNIVERSITY OF HAWAI'I AT MĀNOA

HNS Project Overview

- Online curriculum and resource for students & teachers
- Learning objectives and lessons align with National & Hawaii Content and Performance Standards III (HCPS III) for Health
 - Content comprehension
 - Self management
 - Accessing valid resources
 - Use interpersonal communication skills
 - Advocate for health
- It is important for the students to receive this information at school, then share learned concepts to parents/guardians.

Components

- Pre- and Post- assessments
- 8 Modules - with validated content
- Teacher Guidebook
- Teacher Dashboard/Gradebook
- Teacher lesson plans
- Take home activity/handouts

Intentional versus unintentional injuries

The risk of injury is so high that most people sustain a significant injury that negatively affects or impairs their activities of daily living in some way during their lifetime. These injuries can be classified as intentional or unintentional injuries.

- Intentional injuries result from acts of violence that cause harm to others or one's self (i.e. abuse, suicide, etc.).
- Unintentional injuries, on the other hand, are most often the result of accidents or risky behavior. Falls, poisoning, diving accidents, sports, and transportation incidents are common reasons for such injuries. The CDC reports that in the United States, unintentional injuries are the leading cause of death among youth 0-19 years of age.
- Fortunately, most injuries can be prevented.

What is a concussion?



Concussion is a type of brain injury defined as a "complex pathophysiological process affecting the brain, induced by biomechanical forces." [1-3]

Concussion represents a disturbance to brain function caused by a blow to the head or "violent shaking" of the head, neck, or body. A concussion can happen even if a person does not hit directly in the head. An impact force may be transmitted to the brain from elsewhere on the body.

Reportable symptoms

Reportable symptoms are things that someone who is concussed might tell you that he or she is feeling.

Reportable symptoms: My friend may tell me or an adult that they have...

Physical	Cognitive
Headache	Feeling in a "fog"
Blurred vision	Feeling slowed down
Dizziness or "seeing stars"	Difficulty concentrating
Nausea	
Numbness/tingling	
Sensitivity to light or noise	
Disorientation	
Neck pain	

Types of spine injuries

Chronic vs. Acute

Acute injuries are sudden and can sometimes need more immediate attention. For example, acute injuries can be a broken bone, falling off a bike and hitting your head, or whiplash from a car accident. While chronic injuries are those that happen over longer periods of time such as overuse injuries from sports, **Tech Neck** (texting syndrome), and those related to stress.

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By looking down at an electronic device, the forward head posture causes pain and shoulders. It can also lead to more serious injuries.

Ligaments connect bones. A commonly known injury is the stretching or tearing of muscle or ligaments. For instance you can strain a muscle or ligament.

traumatic injuries. A fracture is a partial or complete break in a bone. A puncture can be a hole in the skin, such as a nail or sharp object. Punctures are more rare and are often caused by sharp objects. Nontraumatic injuries are injuries that are not caused by trauma. Loss or blood flow, such as a stroke, is a nontraumatic injury.

Advocating safety and good decision making

Using good communication skills will help to keep you healthier.

Saying "no" might sound easy, but it is often harder than we think. Are you able to say "no" to your friends?

If you have to question yourself, the answer is probably no.

Saying "no" can get easier with practice and by knowing how to do it. Being able to say "no" and using a few refusal skills can save you from risky situations.

Using humor such as, "Hey, I need all the brain cells I can get nowadays. No thanks," or "I always thought I'd make the news one day, but I don't want it to be over the lifeguards coming to my rescue," can help to lighten the mood.

Learning how to use or make up excuses or reasons can be helpful too. Here are a couple:

"My mom just texted me. Sorry I gotta go before I lose my phone."
 "I have a big game this weekend, I can't risk missing it."

Teacher Dashboard



Middle School Login

Project: Head, Neck, Spine - Teacher Dashboard

Logged in as: **Teacher Test, Alea Intermediate**

Gradebook

Section 1

Module selector

Module 8: Introduction to Prevention and Advocacy

Note: Modules MUST be deployed in sequential order.

Go

SECTION 1			Modules (check box to indicate received)								
ID	Last	First	1	2	3	4					
13	Manabe	Shari	7/8 <input checked="" type="checkbox"/>	8/10 <input type="checkbox"/>	13/14	9/10 <input type="checkbox"/>					
14	Manabe	Shari	5/8 <input type="checkbox"/>	7/10 <input type="checkbox"/>	11/14	10/10 <input type="checkbox"/>	/0	/0	/0	10/10	82.2
1111	Test2	Student	7/8 <input type="checkbox"/>	7/10 <input type="checkbox"/>	12/14						81.1



Middle School Login

Head, Neck, and Spine education - Teacher Dashboard

Logged in as: **Teacher Test, Alea Intermediate**

Class roster editor

[» Go to gradebook](#)

Section 1

ID	Last	First	Section	
13	Manabe	Shari	1	<input type="button" value="Update"/>
14	Manabe	Shari	1	<input type="button" value="Update"/>
1111	Test2	Student	1	<input type="button" value="Update"/>



Teacher Lesson Plans

PROJECT: HEAD, NECK, SPINE

Module 1: Accidents happen

UNIT OBJECTIVES

Accidents often happen unexpectedly and unintentionally. These injuries.

Throughout this learning experience you will learn more about head, neck, and spine, risk factors, prevention, treatment, and advocacy. We start off with an overview of injuries and how they happen.

- Students will be able to recognize risky behavior that can lead to injuries.

- Students will be able to identify risky behaviors.

- In order to complete this project, students will need to complete the following tasks:
 1. Review facts handout with parent/guardian at home.

- In order to complete this project, students will need to complete the following tasks:
 2. List ten (10) examples of potential risky behaviors.
 3. Draw an example and include a brief text description of one of the activities listed that could be considered a risky behavior.
 4. Get parent/guardian signature, detach and return.

LESSON OVERVIEW

Traumatic injuries often happen unexpectedly

- » Traumatic/life changing injuries often happen unexpectedly.
- » Head, neck, and spine injuries can change your life on a temporary or permanent basis.
- » Proper precautions, awareness, and education can decrease risk of life altering injuries.

Risky behavior

- » Risky behavior is any behavior with uncertainty about its outcome.
- » Avoiding risky behavior in your daily life will help to lower your risk of intentional and unintentional injury.

Intentional versus unintentional injuries

- » Intentional injuries result from acts of violence that cause harm to others or one's self.
- » Unintentional injuries, on the other hand, are most often the result of accidents or risky behavior.

Avoiding injury

- » Staying informed
- » Knowing our limits
- » Being aware of our surroundings
- » Practicing good decision making
- » Using good judgment rather than following others

MATERIALS NEEDED

- Module 1 handout

Module cumulative evaluation

- » Total of 14 questions

Take Home Activity/Handout/Worksheet

Module 1: Accidents happen

PROJECT: HEAD, NECK, SPINE

FAST FACTS

Traumatic injuries often happen unexpectedly

- » *Traumatic/life changing injuries often happen unexpectedly.*
- » *Head, neck, and spine injuries can change your life on a temporary or permanent basis.*
- » *Proper precautions, awareness, and education can decrease risk of life altering injuries.*

Risky behavior

- » *Risky behavior is any behavior with uncertainty about its outcome.*
- » *Avoiding risky behavior in your daily life will help to lower your risk of intentional and unintentional injury.*

Intentional versus unintentional

- » *Intentional injuries result that cause harm to others*
- » *Unintentional injuries, on most often the result of accident behavior.*

Avoiding injury

- » *Staying informed*
- » *Knowing limits*
- » *Being aware of surroundings*
- » *Practicing good decision making*
- » *Using good judgment rather than others*

DETACH AND RETURN

List ten examples of potential risky behaviors, then draw an example and include a brief text description of one of the activities you listed that could be considered a risky behavior.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

My child and I have discussed what risky behaviors are and how injuries can be avoided.

Signature

Date

Head, Neck, Spine modules



- Module 1:** Injuries happen
- Module 2:** Introduction to head injuries
- Module 3:** Signs and symptoms of head injuries
- Module 4:** Introduction to cervical/spine injuries
- Module 5:** Recognizing Possible Neck and Spinal Cord Injuries
- Module 6:** How to assist and processes of care
- Module 7:** What to do next (Support system)
- Module 8:** Introduction to Prevention and Advocacy

Educator Course - Number of Schools Represented per Island

Island	Number
Oahu	18
Maui	1
Kauai	2
Hawaii Island	4
Total Number of Schools	25

Educator Course Continue

Elementary Educators	#
K	7
1st	1
3rd	2
4th	4
5th	1
6th	1
Administration	2
Physical Education	1
Total	19

Secondary Educators	#
Art/Music	5
Math	8
Science	7
Foreign language	3
PE	9
General	11
Administration	2
Unknown	1
Computer	2
English	1
Social Studies	3
Total	52

Educator Course Continue

Total Number of Elementary Educators	19
Average Pretest Scores	76.2%
Average Posttest Scores	83.8%
Percent difference	7.6%

Total Number of Secondary Educators	52
Average Pretest Scores	73%
Average Posttest Scores	87.5%
Percent difference	14.5%

Total Number of Educators	#
Started	71
Finished	62

School Demographics

School Locations	#
Oahu	15
Maui	3
Kauai	1
Hawaii Island	2
Total Schools	21

Schools by Grade Level	#
High School	12
Middle School	4
Upper Elementary	2
Lower Elementary	3
Total Schools	21

Homeschooled Students

Location	#
Oahu	19
Maui	1
Hawaii Island	1
Total	21

Student by Grade Level	#
High School	10
Middle School	3
Upper Elementary	4
Lower Elementary	4
Total Number of Students	21

Total Students	#
Started	21
Finished	9

Number of Students who used the Curriculum

Total number of students started = 2162

Number of students at least half-way = 1732

Number of students who finished = 1346

Student Demographic Data

Demographics	2017-2019 N	2019-2020 N	2020-2021 N	2021-2022 N	2022-2023 N	Total N
Total number of students Started	732	329	456	379	266	2162
Number of students at least half-way	530	300	256	415	231	1732
Number of students who finished	39	671	240	363	33	1346

Middle & High School Students

Total Number of Students	2138
Average Pretest Scores	65.2%
Average Posttest Scores	77.5%
Percent difference	12.3%

Upper Elementary School Students

Total Number of Students	3
Average Pretest Scores	85%
Average Posttest Scores	100%
Percent difference	15%

Lower Elementary School Students

Total Number of Students	21
Average Pretest Scores	90%
Average Posttest Scores	93.3%
Percent difference	3.3%



Questions