

Hawaii Trauma Advisory Council



HAWAII TRAUMA ADVISORY COUNCIL
State Trauma Program
Emergency Medical Services and Injury Prevention System Branch
Hawaii State Department of Health

Friday, November 1, 2019
9:00 AM – 12:00 PM

Hawaii State Capitol
Conference Room 016
415 S. Beretania Street
Honolulu, Hawaii 96813

Webinar
<https://zoom.us/j/112317454>
(669) 900-6833
Meeting ID: 112 317 454

AGENDA

Introductions

Dwight Kellicut MD, FACS

Chair, State of Hawaii Trauma Advisory Council (HTAC)

Trauma Medical Director, Tripler Army Medical Center and PACOM JTS

Director of Academics, Research, and Training

Program Director, General Surgery Residency

Attendees:

Punahuele Alcon, Andy Ancheta, Douglas Asano, Speedy Bailey, Kari Benes, Keelee Bennett, Cristina Bertocchi, Libby Char, Korey Chock, Dory Clisham, Marty Collins, Scott Daniels, Lisa Dau, TJ Donayri, Wendy Fisher, Michael Hayashi, Chris Honda, Rick Inae, David Inouye, Sid Johnson, Dwight Kellicut, Daniel Kelly, Melody Kilcommons, Shelbi Kosharek, Tiffany

Lightfoot, Alissa Marchais, Stanley Michaels, Karin Ng, Kyle Perry, Trisha Petit, Devin Puapong, Audra Roulet, Stacie Shibata, Jill Slade, Susan Steinemann, Nicholas Vandenraadt, Maria Ver, Tito Villanueva, Matt Wells

Meeting Minutes Approval

Meeting Minutes Approved

Chairman Recognitions
Dwight Kellicut MD, FACS

Dr Kellicut announced that Susan Steinemann and Marty Collins have stepped down from the PI (performance improvement) committee. This committee is now vacant. Nominations will be at the end of the year.

EDUCATION SEGMENT: Non-Accidental Trauma
LTC Mitch Hamele, MD
Chief PICU Tripler Army Medical Center

- Dr Hamele discussed child abuse and neglect indicators related to physical abuse/abusive head trauma in infants
- Co-morbidities are common indicators
- Physicians are required to report if there is a reasonable suspicion of abuse and perform an abuse evaluation
- A skeletal survey must be done within 24 hours and 2 weeks later
- BRUE (brief resolving unexplained event)
- vomiting without diarrhea
- Frenula tears
- Rib fractures are rare in children even when performing CPR
- Hospital shopping
- Delay in seeking care

- Is non-accidental trauma more prevalent in military populations?
- rates of physical abuse are similar with civilian rates but there are more support programs available through the military

- Lisa Dau – Period of Purple Crying Program
- Hospital education program
- infants less than two weeks of age
- provides parents skills to cope with crying patterns
- Normalizes crying
- Helps prevent Shaken Baby Syndrome

Hawaii State Trauma Plan
Michael Hayashi MD, FACS
Trauma Medical Director, The Queen's Medical Center

(See Attached)

- 2020 Trauma System Plan Workgroups
- Eight initiatives
- Request to have a living document updated quarterly and yearly to present to the legislature
- Recommended that the State hire a PI coordinator and state registrar; at this time the state is lacking in resources to make this reality
- Request to send a list of who's in each workgroup to see where help is most needed

National Highway Traffic Safety Administration
Hawaii EMS Re-assessment and State Trauma System Report
Tiffany Lightfoot MS, RN
State of Hawaii DOH EMSIPSB
State Trauma Program Coordinator

(See Attached Presentation)

- National Association of State EMS Officials Western Region, Portland, October 1-3
- Maui Memorial Medical Center recently evaluated to keep their level III designation
- Welcome Dr. Art Chasen as Trauma Medical Director
- NHTSA Strengths:
 - Statewide ALS System
 - HEMSIS
 - Centralized Billing
- NHTSA Opportunities:
 - Increase EMSIPSB branch personnel
 - License all EMS personnel regardless of ambulance . . . employment/personnel should be able to work regardless of their setting
 - All EMS agencies should document in HEMSIS
 - Establish a single trauma center standard (ACS)
- Admin Rules (trauma center designation)
- Draft completed
- Public comment at February 7th HTAC (location TBD)
- Next is rules for distributing TSSF

- Drafting rules for treat no transport, alternate destination, community paramedicine
- Motion to extend meeting times to 2pm with a working lunch to accommodate 2020 Trauma System Plan Workgroup time
- Motion approved

Emergency Medical Services for Children (EMSC)

Karin Ng

State of Hawaii DOH Disease Outbreak and Control Division

EMSC Program Manager

- Carryover funds used to purchase pediatric restraints
- EMS performance surveys/request to send link to performance measures

Hawaii All Hazards Disaster Plan

Christopher Crabtree PhD

Hawaii Healthcare Emergency Management

- nothing to report -

Sub-Council Reports

Disaster – Kimberly Webster, RN

- Kimberly Webster received a scholarship to attend a burn program in Utah

Finance – Matt Wells, RN

- nothing to report -

Pediatric – Alissa Marchais, BSN, RN

- Early activation of aeromedical services for pediatric transfers
- Kapiolani team transports
- Request help from referring services with timeframe data when a patient is transported to Kapiolani/time that aeromedical was called
- Next steps for follow up on cuffed ET tubes? EMSAC vote?
- Kapiolani has recently gained additional neurosurgery trauma help

Performance Improvement – vacant

- Audra Roulet and Dr. Hayashi fill the vacancy

Trauma System Plan – Michael Hayashi, MD

--Breakout session--

Hawaii Society of Trauma Nurse Leaders – Louise Fincher, RN

- nothing to report -

Regional Trauma Advisory Council Reports

Kauai Trauma Advisory Council Report

- nothing to report -

Oahu Regional Trauma Advisory Council Report

- nothing to report -

Maui County Regional Trauma Advisory Council Report

- nothing to report -

Big Island Trauma Advisory Council Report

- Meeting at UH Research Center on critical access hospitals

EMSAC Report – Libby Char, MD

- written report –

KIPC Report –Lisa Dau, RN

- written report –

IPAC Report – TBD

- Meeting moved to November 4th

1215 Open Forum/General Announcements/Meeting Adjourn

- HTAC members voted to reinstate all day meetings with working lunch (9: 00 AM to 3:00 PM)
- Next HTAC February 7th at Pali Momi

Hawaii Trauma Advisory Council



Friday, November 1, 2019
Reports

EMERGENCY MEDICAL SERVICES FOR CHILDREN (EMSC) UPDATES

NOVEMBER 1ST, 2019

SARAH Y. PARK, MD, FAAP, EMSC PROGRAM DIRECTOR

ALVIN C. BRONSTEIN, MD, FACEP, EMSC PROGRAM CO-DIRECTOR

KARIN NG, EMSC PROGRAM MANAGER



EMSC UPDATES

- EMSC Advisory Committee
 - Held first in-person meeting in early October
 - Will be selecting a chair
- Carryover Budget
 - Restraints
 - Training and Webinars
 - Working with KCC and JABSOM on peds training

PM SURVEYS

- The EMS Performance Measure Survey (PMs 2 & 3) will be taken annually
 - Next survey will be distributed Jan – Mar 2020
- The Peds Ready Performance Measure Survey (PMs 6 & 7) will occur next summer

HAWAII EMSC WEBSITE

HAWAII EMSC WEBSITE

Hawaii Emergency Medical Services for Children (EMSC)

HAWAII EMSC

When it comes to injuries and illness, children are not "little adults". Treatment of injured and ill children requires specific skills and types of emergency care equipment and supplies for proper assessment and emergency care. The Emergency Medical Services for Children (EMSC) is a national initiative administered by the U.S. Department of Health and Human Services' Health Resources and Services Administration (HRSA) and the Maternal and Child Health Bureau (MCHB). Its focus is to reduce child and youth disability and death due to severe illness and injury by ensuring access to high-quality emergency medical care for all children everywhere in the United States. It is the only federal grant program that specifically focuses on addressing the needs of children in prehospital and hospital emergency medical systems, and has provided grant funding to all 50 states, the District of Columbia, and five U.S. territories since its establishment in 1985.

The program develops partnerships across the continuum of emergency care and provides special programs and training opportunities, all with the aim of ensuring that state-of-the-art emergency medical care for ill or injured children and adolescents is available when needed, ensuring that pediatric services are well integrated into the existing state emergency medical services (EMS) system and backed by optimal resources, and ensuring that the entire spectrum of emergency services, including primary prevention of illness and injury, acute care, and rehabilitation, is provided to children and adolescents at the same level as adults.

EMSC STATE PARTNERSHIP (SP) PROGRAM

The EMSC State Partnership Program is a statewide collaborative project under EMSC that provides funds to states to assist in improving the pediatric component of their EMS system. Its mission is to ensure effective pediatric emergency care according to best practice standards statewide through expanding and improving the state's capacity. State governments and accredited schools of medicine in states are eligible for the grants, which can award up to \$1,500,000 per year, for a 4-year grant period (current grant period April 2018-April 2022).

UPCOMING EVENTS

- Coming Soon

HELPFUL GUIDES

- Child Passenger Safety
- Treating Children: Guidelines for EMTs/Paramedics
- Pediatric Trauma Protocols

RESOURCES

- AAP Pocket Book - "Disaster" Ready: How to Make Family Preparedness Safer
- American Academy of Pediatrics Children & Disaster
- American Academy of Pediatrics Family Readiness Kit
- Children's Safety Network
- EMSC Innovation and Improvement Center
- National EMSC Data Analysis Resource Center (NEMARC)

<http://health.hawaii.gov/docd/emsc/>

MAHALO

Questions?

Disaster Sub Committee Standing Report
10/30/19

In Attendance:

Marty Collins

Tiffany Lightfoot

Korey Chock

Kimberly Webster

Not in Attendance:

Chris Honda

Chris Crabtree

Update on progress of State Disaster Transfer Agreement:

Awaiting finalization of signatures from Tripler Hospital: Done

Individual Island EMS agreements will be left standing. Reason being if there are changes made to those agreements the entire State Disaster Transfer Agreement would need to be rectified.

Review of EMS Performance measures:

EMSC 06 INTERFACILITY TRANSFER GUIDELINES—The percent of hospitals with an Emergency Department (ED) in the state or territory that have written interfacility transfer guidelines that cover pediatric patients and that include the following components of transfer:

- Defined process for initiation of transfer, including the roles and responsibilities of the referring facility and referral center (including responsibilities for requesting transfer and communication).
- Process for selecting the appropriate care facility.
- Process for selecting the appropriately staffed transport service to match the patient's acuity level (level of care required by patient, equipment needed in transport, etc.)
- Process for patient transfer (including obtaining informed consent).
- Plan for transfer of patient medical record.
- Plan for transfer of copy of signed transport consent.
- Plan for transfer of personal belongings of the patient.
- Plan for provision of directions and referral institution information to family.

Goal for this measure is that by 2021:

Disaster Sub Committee Standing Report
10/30/19

Ninety percent of hospitals in the state or territory have written interfacility transfer guidelines that cover pediatric patients and that include specific components of transfer.

EMSC 07 INTERFACILITY TRANSFER AGREEMENTS—The percent of hospitals with an Emergency Department (ED) in the state or territory that have written interfacility transfer agreements that cover pediatric patients.

Goal for this measure is that by 2021:

Ninety percent of hospitals in the state or territory

Improved collaboration between HTAC, Disaster Sub Committee and HHEMC:

HHEMC has increased number of staff working with Mr. Crabtree allowing for more representation at HTAC and Disaster Sub Committee meetings.

Review of real world application of Disaster Plan:

Once plan is distributed Disaster Sub Committee will review.

Additional training available to State health care members: 15 / 50

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwjwZbNoNbkAhVMs54KHRTXDAMQFjAAegQIBxAC&url=https%3A%2F%2Fwww.calhospital.org%2Fsites%2Fmain%2Ffiles%2Ffile-attachments%2F15minutesto50patients_2_up.pdf&usg=AOvVaw2hXM6UGBrrDBDUAHOadVXT

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&uact=8&ved=2ahUKEwjwZbNoNbkAhVMs54KHRTXDAMQtwlwA3oECAkQAQ&url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DNOpUkc7xXvI&usg=AOvVaw3oiPIORkH-PNi2VC6tDwO9>

Hawaii Society of Trauma Nurse Leaders

Chair: Louise Fincher

HSTNL did not have a meeting this quarter, so no updates.

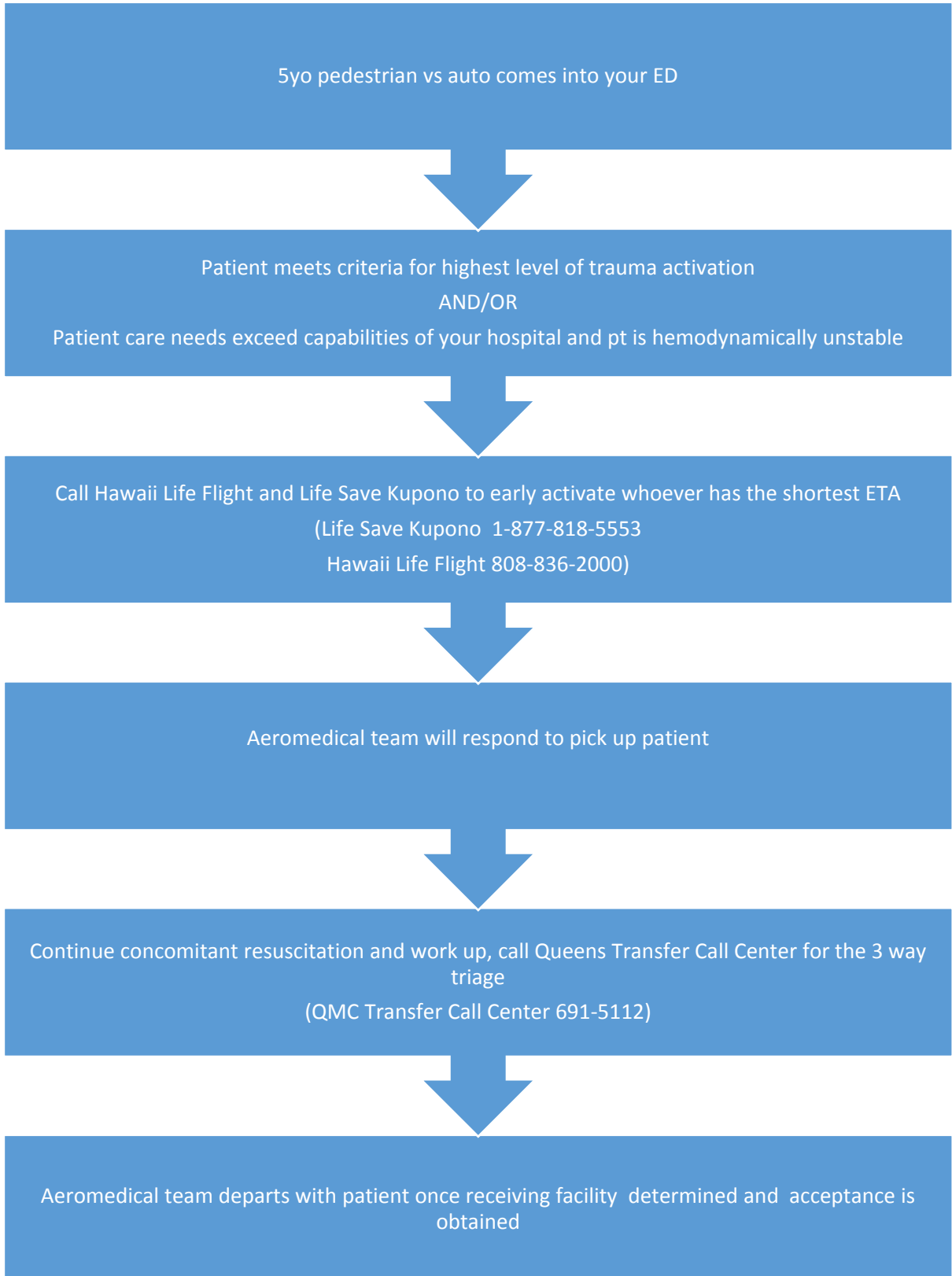
HTAC pediatric sub-council

Chair: Alissa Marchais

Also attaching the flowchart for the early activation of aeromedical services for dissemination. It is a visual aid to assist the ED provider at CAH, pretty much the same guideline we already vetted through HTAC but in a visual aid form, it has already been reviewed and approved by aeromedical teams.

1. Pediatric head injury discussion from yesterday. 2/3 partial neurosurgery coverage at KMCWC, suggestions for coverage.
2. Follow up on cuffed ET tubes/LMAs-voted on at HTAC and EMSAC, next steps, how can we support and implement?
3. Early activation of Transport guidelines. Feedback? Discussion- I will have a few cases

Early Activation of Aeromedical Services for Pediatric Transfers



EMSAC Highlights 2019 October 16

1. Educational presentation
 - a. None because of time constraints relating to NHTSA analysis of Hawaii State EMS system
2. State Standing orders
 - a. Need to embark on review of State Standing Orders for release in 2020, which would be a 2 year cycle
 - b. Suggestions made by NHTSA team to include Paramedic input
 - c. Medication Calculation Link to be included in the Standing order link
 - i. Time frame for this is to have it done in 3 months
 - ii. Per State EMS office, "the financials are in progress"
3. EMSAC Orientation project
 - a. Will solicit dates from EMSAC members and State EMS said they will schedule the orientation
 - b. There is interest from Fire in some counties to be able to access the orientation document just to gain familiarity with the state EMS system and have an overview
4. Complex Coordinated Terrorism Attack (CCTA) workshop held in all 4 counties
 - a. Maui, Kauai and Oahu attendees discussed lessons learned and wish to act on gaps identified
 - b. Desire to continue to develop relationships and continue working with and including hospitals in the preparation process along with first responders
5. Budget
 - a. Still awaiting budget for Statewide EMS for FY 21
 - i. Current budget is lacking approx. \$21 Million, mostly related to collective bargaining increases and the continuation of the 3 ambulances that were added in 2017 legislative session
6. Electronic medical record
 - a. State EMS office hopes to have new ePCR by the end of 2019
 - b. Hoping for an interface with hospitals and EMS to be able to share/access data for QI purposes
7. Personnel – new State District medical control officer = Dr. Miroslaw Szatko
8. Trauma
 - a. Grant money received for TECC courses for the next year

KIPC Report for HTAC, November 1, 2019

Submitted by Lisa Dau, RN, Injury Prevention Coordinator, Kapi'olani Medical Center

KIPC/DOT sponsored the National Child Passenger Safety Certification training in August, 2019 at Castle Medical Center, 11 individuals from various agencies including hospitals, health centers and the community completed the certification course and are now car seat technicians.

September 15-21 was National Child Passenger Safety week ending with September 21 National Seat Check Saturday. All counties participated in this event hosting community car seat checks throughout Hawai'i. On O'ahu, Waipio Shopping Center hosted the event. Several other agencies participated including HPD, HFD, water safety organization, and others. 45 car seats were checked at the Waipio Shopping Center event. Data from other events were not available at this time.

Child Safety ID stickers were initiated at each of the community events statewide on National Seat Check Saturday. Child Safety Stickers are placed on child car seats/boosters for emergency purposes to assist first responders in identifying child information if a parent/driver is not able to. This was a suggestion by EMS. KMCWC Trauma Program funded a limited amount of the stickers for each county.

KIPC partners participated at the HFD Kick-off at the Honolulu Zoo on Oct 5, providing information and demonstration on keeping kids safe in and around vehicles.

The QMC and KIPC sponsored a community car seat event on September 30 and Oct 6 (CYD). The QMC and DOH-Neurotrauma Services provided education and free helmets at Children and Youth Day on Oct 6.

HPH sponsored Kids Fest on Oct 27 and provided education and resources for Pedestrian Safety, Fire & Burn Prevention and Bike/Wheeled product safety. DOH-Neurotrauma Services provided free helmets.

KIPC continues to partner with HPD at their DUI enforcements stops, KIPC partners providing education and resources to drivers/families/kids who are not properly restrained.

KIPC partner Safe Sleep Hawai'i had their annual Safe Sleep Summit on Oct 7 at Pomaikai Ballroom. Dr. Rachel Moon, pediatrician and SIDS researcher from University of Virginia was the guest speaker, the focus was safe infant sleep, interventions for behavior change.

September 27 was proclaimed Infant Safe Sleep and SIDS Prevention month (Oct) at the Governor's office, partners from KMCWC, QMC, DOH and the Parent Line were in attendance.

Legislative news: KIPC is currently seeking a representative in both the house and senate to introduce a bill for proposed changes to the current Child Passenger Law, removing outdated language, adding rear-facing until the age of 2 (now required in 14 states and DC), and increasing fines. Last year, the bill was introduced but no hearing were scheduled.

Next KIPC meeting is scheduled for Dec 6, 12-1:30pm at Kapi'olani Medical Center.

Hawaii Comprehensive Statewide Trauma System Plan

November 2019

Hawaii Department of Health

Emergency Medical Services and Injury Prevention Branch

Developed by the:

EMS IPS Branch Trauma Program Staff

And

The Hawaii Trauma Advisory Council

Hawaii State Department of Health

Bruce Anderson, PhD

DIRECTOR OF HEALTH

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Introduction

Injury is a major public health problem in Hawaii. It is the leading cause of death and disability between ages one and 44, and the fourth leading cause of death overall among state residents. Since 2016, injury related deaths per 100,000 population have increased in the state from 49.3 to 52.8 according to the United Health Foundation. Injury is a *disease* that can be prevented or managed in such a way that reduces severity and ultimately improves outcome. Successful management of traumatic injury requires the collective development of a comprehensive statewide trauma system built on the foundations of patient safety, performance improvement, community education, patient outcomes, research opportunities, and compliance with national bench mark standards.

In its 2003 document, *Trauma System Agenda for the Future*, the National Highway Traffic Safety Administration (NHTSA) defines a trauma system as “an organized, coordinated effort in a defined geographic area that delivers the full range of care to all injured patients and is integrated into the local public health system. The true value of a trauma system is derived from the seamless transition between each phase of care, integrating existing resources to achieve improved patient outcomes. Success of the trauma system is largely determined is largely determined by the degree to which it is supported by public policy.”

The purpose of this document is to provide a description of the activities that have been historically undertaken to develop a trauma system for Hawaii and to introduce proposed activities for the statewide trauma system. It should serve trauma stakeholders to educate new partners regarding the history and scope of the comprehensive trauma system that is envisioned for Hawaii. A thorough assessment using national benchmarks, selection of strategic and measurable objectives and evaluation process will be completed every three years by the Department of Health (DOH) with the participation of the Hawaii Trauma Advisory Council (HTAC). The Hawaii State Trauma System Plan will provide a measuring stick for assessment of progress, making it a dynamic rather than static document and process.

Historical Background for National and State Trauma Development

National

During the late 1950s, areas of excellence in trauma care were being developed utilizing lessons learned from military experience, aeromedical evacuation and the concept of the “Golden Hour”. Fledgling trauma centers included the R. Adams Cowley Shock Trauma Center in Baltimore, and Cook County Medical Center in Chicago. In 1966, the National Academy of Sciences published a white paper entitled *Accidental Death and Disability: The Neglected Disease of Modern Society*. The reforms inaugurated by this paper led to the establishment of the first emergency medical services systems and the recognition of injury as a public health concern.

In 1976, a tragic crash of a small plane carrying an orthopedic surgeon and his family into the cornfields of Nebraska led to recognition that many hospitals and providers were unprepared to manage seriously injured patients. Two years later, the first Advanced Trauma Life Support

(ATLS) course was presented by the American College of Surgeons. *Hospital Resources for Optimal Care of the Injured Patient* was first published in 1979 by the American College of Surgeons. The American College of Surgeons has been verifying hospitals' compliance with the criteria in the resource document since 1987. The most recent version, *Resources for Optimal Care of the Injured Patient* (also known as "the green book") published in 2006, serves as a guide for hospitals seeking trauma center designation.

In 1992, under the auspices of the Health Resources and Services Administration (HRSA), the Model Trauma Care Systems Plan was developed for the United States. Initially, the focus was on developing Level I and Level II trauma centers and pre-hospital protocols that bypassed other acute care facilities to bring injured patients to the trauma centers. Although death and disability were significantly decreased through this approach, by the mid-1990s, it became evident that the burden of injury in suburban and rural areas was not being adequately addressed. To better serve the entire population of a state or region, *inclusive* trauma systems were developed. Level III and IV centers emerged and the concept of "an acute care hospital within a trauma system" encouraged all health care facilities to participate to the extent of their resources in the care of injured patients.

Hawaii

For over 25 years, development of a statewide trauma plan has been discussed by the Department of Health (DOH) and healthcare providers, both institutions and individuals. In 1992, as part of the HRSA Trauma/EMS program, initiatives were begun to develop a state trauma plan and collect statewide trauma-related data. The plan developed at that time was limited to guidelines for pre-hospital trauma triage and transport. Hawaii's challenges related to the nature of an island state were addressed in an aero-medical strategic plan published in 1999. A Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis which identified essential elements for a statewide trauma system was completed in 2003. Lack of funding and personnel made it difficult to sustain development work.

In 2005, the Healthcare Association of Hawaii and the Department of Health worked collaboratively to facilitate a visit from the American College of Surgeons Trauma System Consultation Program to review the status of the Hawaii Trauma System. The key recommendations from that survey were included in a report to the State Legislature in 2006. After reviewing the findings, the twenty-third legislature, through Senate Concurrent Resolution No.70, requested that the Director of Health develop a trauma system plan for Hawaii.

The American College of Surgeons Trauma Systems Committee visited the state January 2017 to review the state trauma system with a final report received in April 2017. The Trauma System Consultation Report Priority Recommendations are summarized in Appendix E.

Enabling Legislation

With the support of hospitals, physicians, key legislators and other stakeholders, the Trauma System Special Fund was created by **Act 305 of the 2006 Legislature**. The Act provided for the establishment of a special fund to support the continuing development and operation of a comprehensive state trauma system to provide access to trauma centers for injured patients across the state. The fund is to be administered and expended by the Department of Health.

By **Act 102 of the 2007 Legislature**, a portion of the moneys from the cigarette tax is deposited in the trauma system special fund. In 2008, Act 231 was passed, levying a trauma system surcharge in addition to civil penalties for a number of offenses including failure to properly use a child passenger restraint system, inattention to driving, traffic accidents involving death or bodily injury, vehicle and property damage, failure to render aid, racing, speeding under special circumstances, excessive speeding, and operating a vehicle under the influence of an intoxicant.

Hawaii Revised Statutes, Chapter 321, Part XVIII

321H Neurotrauma

321-22.5 Trauma system special fund

321-221-236: State Comprehensive Emergency Medical Services System

Statewide Structure of the Trauma System

DOH/EMSIPS

The State Department of Health (DOH) is the legally responsible entity and is the lead agency for the State Trauma System and statewide trauma development. The Emergency Medical Services-Injury Prevention Systems Branch (EMSIPSB) Trauma Program is the program within the DOH responsible for the administrative functions of planning, developing, maintaining, and evaluating the system. The State Trauma Program Coordinator manages the day to day operations of the trauma system including designation consultation, trauma registry management, and performance improvement activities. Input from stakeholders at multiple levels is essential to the success of development and maintenance of the State Trauma System.

Hawaii Trauma Advisory Council (HTAC)

The Hawaii Trauma Advisory Council (HTAC) has been formed as a broadly representative advisory body of trauma stakeholders. The purpose of the HTAC is to advise the DOH on matters related to the development, implementation, evaluation and improvement of trauma services statewide. Membership of the HTAC includes representatives of each of the trauma centers, hospitals providing specialty services such as pediatric critical care, burn care and rehabilitation, professional organizations such as the American College of Surgeons, American College of Emergency Physicians, Emergency Nurses' Association, injury prevention specialists, EMS and aero-medical agencies. As the council begins addressing system issues, additional members or ad hoc attendees may include the medical examiner's office, legislators, insurance

payers and interested community members. Representatives of the RTACs shall report activities and findings to the HTAC. The HTAC Charter is found in **Appendix D**.

Regional Trauma Advisory Council (RTAC)

Regional Trauma Advisory Councils (RTACs) will be formed in each county to address specific local issues which may include regional EMS triage and transport guidelines and patient transfer protocols. Council members should include acute care facilities, both trauma designated and non-designated, pre-hospital and transfer agencies, public safety providers, injury prevention personnel, and consumers. One hospital will serve as 'lead' trauma center for the region. Requirements for the lead hospital include regional outreach, education, prevention and quality review. RTAC meetings should be held at least quarterly. Regional goals and objectives should be developed. Activities should be reported to the Hawaii Trauma Advisory Council. Additional funding has been provided for hospitals agreeing to the lead role.

The Hawaii statewide trauma system is an inclusive system. In an inclusive system, consideration must be given to all acute care facilities which care for injured patients. Hospitals choosing not to seek designation but wishing to participate in system development may participate on HTAC.

As the system matures, it is anticipated that committees will develop to address specific issues such as research and education. The DOH will facilitate a number of operational committees requiring the input from the trauma centers to include hospital designation/verification, trauma medical directors, trauma program managers/trauma registrars, peer review, and performance improvement.

Prehospital care

Hawaii has a mature, statutorily enabled Emergency Medical Services (EMS) system. The DOH is responsible for ensuring the quality of services provided by the pre-hospital agencies. The state inspects vehicles and licenses personnel, provides for communication/radios, develops and implements patient care guidelines. Medical oversight for the EMS system occurs at several levels: the State EMS Medical Director, District (county) EMS Medical Directors, and agency EMS Medical Directors. Transporting agency personnel have on-line medical oversight via radio and/or telephone to emergency physicians in base hospitals.

911 emergency ambulance providers are contracted by the DOH and billing for services is done by the State EMS office. Current contractors are City and County of Honolulu Emergency Medical Services for Oahu, Hawaii County Fire Department for the Island of Hawaii, and American Medical Response for Maui and Kauai Counties.

The Hawaii EMS statute provides for the establishment of the EMS Advisory Committee (EMSAC) with representation from consumers and EMS system participants. The committee meets on a quarterly basis and serves in an advisory capacity to the Department on all matters relating to the state system.

Trauma Triage and Transport

The State EMS trauma triage and transportation guidelines are designed to assist EMS providers and Base Hospital Physicians in identifying severely injured patients who will most benefit from the state trauma system.

“30 Minute Rule”

The primary goal of the EMS trauma triage and transportation guideline is to assure that severely injured patients are rapidly transported to the facility with the highest trauma center designation level, ideally within 30 minutes of the injury. This may lead to occasions when a trauma patient is transported to the highest level designated trauma facility, bypassing a closer, lower designated or undesignated facility. The intent of bypass is to eliminate delays in providing definitive care.

Occasionally, particularly on the Neighbor Islands, the only facility within 30 minutes may not be a trauma center. In that case, every effort must be made to initiate transfer to a higher designated facility as soon as possible.

Exceptions to the “30 Minute Rule”

A cardiac arrest or a compromised airway in the pre-hospital setting are exceptions to the 30 minute rule. Patients with a compromised airway or those in cardiac arrest should be transported immediately to the nearest facility with personnel and resources to secure an airway, whether the facility is designated or not.

The state trauma system recognizes that professional judgment by EMS providers and on-line medical control is needed. When guidelines are not followed, the agency EMS medical directors must review the case with EMS providers and managers for appropriateness and for potential educational follow-up. All EMS Medical Directors have the opportunity serve on the HTAC.

Indicators of Serious Injury and Transport Guidelines

Appendix A is a decision algorithm to assist EMS providers in determining which patients meet the criteria for trauma triage and transport. **See Appendix A (updated to reflect Tripler as ACS Level II for injured DoD personnel identified in the field).**

Acute Care Facilities

Research indicates that the risk of death is significantly lower when care of the injured patient is provided in a trauma center than in a non-trauma center. The trauma system seeks to have trauma center care available to all persons in Hawaii within 30 minutes or less of their injury. As a small, low trauma volume state with the geographical extremes of a multi-island state, this can best be accomplished in the following way:

- 1) Develop and support a robust, centrally located Level I or Level II trauma centers. The Queen's Medical Center currently fills the Level I role along with Tripler as a Level II trauma center for DoD personnel.
- 2) Support existing and develop additional Level III trauma centers throughout the state to provide rapid assessment, evaluation and treatment of injured patients utilizing available resources, with a plan for rapid transfer to a higher level of care when necessary. Existing Level III centers include: Hilo Medical Center, North Hawaii Community Hospital, and Kona Community Hospital in Hawaii County; Maui Memorial Medical Center in Maui County; Kapiolani Medical Center for Women and Children and Pali Momi Medical Center on Oahu; Wilcox Memorial Hospital in Kauai have all completed Trauma Level III verification and designation by the State of Hawaii.
- 3) Develop a Pediatric Trauma Center. ACS recognizes only Level I and II trauma centers but due to the lack of pediatric neurosurgical coverage available in Hawaii, DOH EMSIPSB recognizes a Pediatric Level III Trauma Center with Kapiolani Medical Center for Women and Children. Kapiolani Medical Center for Women and Children has completed Pediatric Level III trauma center verification and obtained pediatric designation by meeting the Hawaii Trauma Center Standards for Pediatric Trauma Centers and will be encouraged to work towards becoming an ACS verified Level II Pediatric trauma center. In addition, Tripler Army Medical Center is considering Pediatric ACS Level II at the next verification visit in 2022.

Designation of Hawaii Hospitals as Trauma Centers

All hospitals are encouraged to participate in the statewide trauma system to the extent that their resources allow. The system's goal is to match the resources of the hospitals with the needs of the injured patient as efficiently as possible with the additional goal of having seriously injured patients able to access a trauma center within 30 minutes of injury.

An organized approach to trauma care should include the commitment of a hospital's administration and medical staff to trauma care, a team approach to trauma patient assessment, data collection and contribution to a trauma registry, and performance improvement activities such as trauma multi-disciplinary hospital review and medical peer review.

In order to be designated as a trauma center, hospitals must meet minimum criteria developed by the State, based on the recommendations of the American College of Surgeons Committee on Trauma and be supported to move forward with becoming a trauma center by the DOH EMSIPSB and HTAC. These hospitals must be contracted with the State of Hawaii DOH EMS IP SB and part of the trauma system plan. The HTAC committee as well as DOH EMSIPSB will work with the ACS Trauma System Consultation Visit plan for the State as well as reviewing creating a tool to assist in determining the number, level, and location of trauma centers which is critical element of trauma system function and disaster response. The importance of controlling the allocation of trauma centers, as well as the need for a process to designate trauma centers based upon regional population need, has been recognized as an essential component of trauma system design and focus of HTAC and DOH EMS IP SB. Trauma center designation should be guided by the regional trauma plan based upon the needs of the population being served, rather

than the needs of individual health care organizations or hospital groups. It is the professional obligation of the surgeons, physicians, nurses, EMS providers and public health professionals to work together to ensure that the patients' needs come first. Trauma system needs should be assessed using measures of trauma system access, quality of patient care, population mortality rates, and trauma system efficiency. Measures to be considered include:

- Number of Level I, Level II, and Level III centers per 1,000,000 population
 - Oahu
 - Level I: Queens Medical Center
 - Level II: Tripler Army Medical Center
 - Level III: Pali Momi; Kapiolani Women and Children's; Castle
 - Kauai – Level III: Wilcox
 - Maui – Level III: Maui Memorial
 - Big Island
 - Level III: North Hawaii, Hilo, and Kona
- Trauma System Performance Measures to be reviewed quarterly at HTAC
 - Percentage of population within 30 minutes of a Level I/Level II center and gap analysis
 - EMS transport times
 - Percentage of severely injured patients seen at a trauma center or per county
 - Trauma-related mortality
 - Frequency, nature, and timeliness of inter-hospital transfers per region
 - Percentage of time trauma hospitals are on diversion status
 - Injury prevention and patient safety measures
 - Disaster planning

Allocation of trauma centers should be reassessed on a regular scheduled based on an updated assessment of trauma system needs through HTAC.

The DOH plans to recognize three levels of designation, I, II and III; with I and II being the highest level of Trauma Care. See definitions in Appendix C for more information regarding designation levels. The DOH may also recognize facilities that provide specialized services to injured patients as Trauma Specialty Facilities. Examples are facilities that provide burn care but do not meet all trauma center criteria.

Hawaii Trauma Center Standards

The verification criteria for Levels I, II and III trauma centers in Hawaii are aligned the American College of Surgeons Committee on Trauma national standards. Currently, two methods of verification are accepted for Level III trauma centers. By 2022, DOH would like to establish a single method for verification using the American College of Surgeons Committee on Trauma Verification, Review, and Consultation Program for all trauma centers.

Process for State Designation

Hawaii Level I and Level II Trauma Centers

Hospitals seeking to become or continue as Hawaii Level I or II Trauma centers will successfully complete the American College of Surgeons (ACS) verification survey. The DOH will be named as the designating body in the ACS application and state trauma program staff will participate in the survey as observers.

Upon successful completion of the survey, the hospital/verification agency will submit verification documentation ensuring that the ACS Trauma Standards are met, to the State Trauma Program Coordinator who will confer with the State Trauma Medical Director role to review to ensure that both ACS Trauma Standards and the Hawaii Trauma Center Standards for Level I and II are met will then make recommendations to the Director of the DOH. The Director will then grant the appropriate trauma center designation based on recommendations from the verification visit final report and recommendation from State Trauma Program Coordinator and the State Trauma Medical Director.

Hawaii Level III Trauma Centers

Two options exist for hospitals seeking to become or continue as Hawaii Level III Trauma Centers.

Option A: Hospitals may choose to have a verification survey by the ACS and follow the same verification pathway as Level I and II centers.

Option B: Hospitals may choose to have a verification survey developed by the State Trauma System.

The process is as follows:

- Complete and submit a self-reported survey to the State Trauma Office. The application will be reviewed for completeness and clarity.
- The DOH will arrange for a verification survey conducted by a state verification review team including Trauma Care Association of America (TCAA) review team consisting of physician and nurse reviewers. State of Hawaii Trauma Program Coordinator will also be present for all verification surveys.

Upon successful completion of the survey and assurance that the Hawaii Trauma Center Standards are determined to be met, the hospital/verification agency will submit verification documentation to the State Trauma Program Coordinator who will confer with the State Trauma Medical Director role to make recommendations to the Director of the DOH. The Director will then grant the appropriate trauma center designation based on recommendations from the

verification visit final report and recommendation from State Trauma Program Coordinator and the State Trauma Medical Director.

Provisional Status

Trauma Centers not meeting all verification criteria may be granted a one year ‘provisional’ status upon recommendation of the survey team and approval of the DOH. Hospitals not meeting the verification criteria after one year provisional status will no longer be designated and must re-apply for verification and be re-surveyed.

Due to the rural nature of much of the state, hospitals unsuccessful in completing the designation process or declining to participate will continue to receive trauma patients when there are no other options. These hospitals, however, **will not be eligible to receive Trauma Care Special Funds.**

Re-verification/Designation

The application and designation process for re-verification will be the same as the initial application process.

Changes in trauma center status including resource availability, personnel changes, organizational name changes and organization chart changes affecting trauma **must** be self-reported to the DOH.

Inter-hospital Transfer

One goal of the trauma system is to match the patient’s needs with the available resources. Often, this will mean that an injured patient must be transferred to a higher level of care, or an equivalent level of care with a resource (such as orthopedic surgery) not currently available at the initial trauma facility. Repatriation agreements for patients to return to their community hospital after their initial care should also be components of transfer guidelines. In order to accomplish this goal, inter-facility transfer agreements must be developed and implemented. The value of these agreements is to design a process prior to its necessity that allows the injured patient to receive the specialty care needed.

Inter-facility transfer agreements may be facilitated by clinical transfer guidelines to be developed by sub-committees of the HTAC and RTACs.

The Trauma System performance improvement program will develop performance improvement criteria to evaluate the inter-facility transfer process.

Trauma Registry

Trauma System: Agenda for the Future, a document put forth by NHTSA, defines a trauma registry as “a collection of data on patients who receive hospital care for certain types of injuries. Such data are primarily designed to ensure quality trauma care and outcomes in individual

institutions and trauma systems, but have the secondary purpose of providing useful data for the surveillance of injury morbidity and mortality.” A pillar of any trauma system, the trauma registry provides a means to identify areas of educational needs and systems performance improvement, as well as measure the impact of interventions on patient outcomes.

The trauma registry selected for use in the Hawaii Trauma Registry is ImageTrend Trauma Registry™. Collection and submission of trauma data is a requirement for trauma center designation and receipt of Trauma Special Care Funds. Each participating facility will be required to collect and submit data to the state registry concurrently as ImageTrend Trauma Registry is a web-based program and concurrent data entry is a benefit of the web-based system. The DOH will work with each individual facility to determine what type of registry capability and configuration of ImageTrend™ will best fit their needs. Hardware to perform the data registry and trauma registry personnel will be provided by individual hospitals and software licensing, maintenance fees, and technical support and education will be the responsibility of the state registry. All trauma registries will utilize ImageTrend Trauma Registry™ and be on the web-based system provided by the DOH unless otherwise approved by the DOH. Should the DOH determine that a trauma registry could use an alternate registry, the provider would have to submit data monthly to the State Trauma Registry and be responsible to ensure that the data is uploaded in the State Trauma Registry. Failure to upload trauma data to the State Trauma Registry would be a violation of the Trauma Care Special Funds and violation of both ACS and State Trauma Standards.

The minimum data set required by the state will be the National Trauma Data Bank® Elements. Other elements will be added over time based on assessed needs of the program and recommendations from the HTAC registry committee. Trauma patient inclusion criteria are outlined in Appendix B. Hospitals may determine their own inclusion criteria and data set, but must meet the minimum data set criteria. Patients included by individual hospitals but not meeting the state’s inclusion criteria will be excluded from state registry. Individual hospitals will be responsible for downloading aggregated patient data to the National Trauma Data Bank annually.

Performance Improvement in Patient Care

The development of a statewide trauma system must include a mechanism to measure, evaluate and improve the process of care and its outcome. The process must be a continuous, multidisciplinary effort to improve the effectiveness of the system processes and components including pre-hospital care (dispatch, medical control, triage, and transport), hospital care, inter-facility management, and rehabilitative care.

In addition to the multidisciplinary trauma system performance improvement programs, each entity within the system will develop a performance improvement program consistent with the rules and regulations governing the agency.

Legislation for protection from discovery already exists in HRS §624-25.5. Efforts have begun to provide similar protection for system wide inter-agency/inter-facility performance improvement programs.

An effective PI program results in implementation of plans for corrective action or improvement when indicated and modification of practice guidelines or the trauma plan when appropriate. A formal performance improvement plan and process for the statewide trauma system will be developed.

Performance Improvement in Patient Safety and Injury Prevention

Injury is a disease. Like many other diseases, it is predictable and preventable. The ultimate goal of an organized trauma care system is to prevent injuries.

The 2005 ACS Systems survey found that, “The injury prevention and control activities represent one of the most mature aspects of Hawaii’s current trauma system. The Injury Prevention and Control Section is administered within the EMS IPCS Branch. It is well staffed and includes an injury epidemiologist.”

The Injury Prevention Program underwent an independent external program review in 2003, conducted by the State and Territorial Injury Prevention Directors. Suggested goals included the following:

- Develop and implement a plan to disseminate injury data to policymakers, and provide public education about injuries as a major public health problem to develop a stronger constituency for injury prevention.
- Work with EMS providers, hospitals, other health-related organizations and the Department of Education to promote injury prevention policies on neighbor islands.
- Identify other opportunities to implement regulations or policies to promote injury prevention.

Incorporation of these goals into the statewide trauma system plan is crucial to the success of the plan. All agencies involved with the trauma system shall demonstrate collaboration with or participation in injury prevention program.

Injury Prevention Performance Improvement Initiatives

- Pedestrian Struck
 - Hawaii has one of the highest pedestrian struck death rates in the US
 - Queens Medical Center and Tripler Army Medical Center observational study
- TBI
 - Child bicycle helmets
 - Motorcycle safety classes
- Recognition of NAT
- Alcohol Checkpoints
- Child safety car seat checks
- Suicide awareness

Disaster Planning and Integration with the Trauma System

The American College of Surgeons (ACS) views trauma systems and trauma centers as integral parts of disaster preparedness. Trauma system leaders should be actively involved in public health emergency preparedness planning to ensure that trauma system resources are integrated into state and local disaster resource plans. Ideally, EMS, the trauma system, and the all-hazards emergency medical response system will have operational trauma and all-hazards response plans and have established an ongoing cooperative working relationship to ensure trauma system readiness for all-hazards events. Relationships and working cooperation between the trauma system and public health, EMS, and local/state/federal emergency management agencies should support the provision of assets that enable a more rapid and organized disaster response when an event occurs.

The Hawaii State Trauma System should work to conduct both regional and statewide disaster mass casualty exercises at least yearly. In addition, the Hawaii State Trauma System should be a full participant in the bi-annual RIMPAC mass casualty exercise bringing local, county, state, federal and host nation partners together in a single exercise

Specialty Trauma Services

Pediatric Trauma

More children die from injury than from all other causes combined. Effective care of the injured child requires an inclusive approach which recognizes injury as a major pediatric health problem.

The most seriously injured children in Hawaii with head injuries are taken or transferred to The Queen's Medical Center, the state's Level I trauma center. Children identified in the field as Department of Defense beneficiaries and in proximity, will be taken to Tripler Army Medical Center, the state's Level II trauma center. The trauma center is prepared with the resources to provide injured children with rapid assessment for injury and resuscitation as necessary, including surgery. After the initial resuscitation, patients may be transferred to Kapiolani Medical Center for Women and Children (KMCWC) for specialized pediatric services. There is currently in existence an agreement between The Queen's Medical Center and KMCWC to provide expert pediatric consultation and treatment recommendations for injured children who are patients at The Queen's Medical Center. KMCWC should be considered first for all other injured pediatric patients.

Participation in the trauma system by hospitals with special pediatric resources is essential in order to effectively meet the needs of this special population. Therefore, Kapiolani went through Trauma Verification and is the state verified and state designated Pediatric Level III Trauma Center for Hawaii.

Burn Trauma

Hawaii sees an average of 60 persons per year hospitalized for burn injuries. Although a relatively small number, the complexity and cost of this resource intensive specialty injury field

requires inclusion in any discussion of the trauma system. There are two burn programs in Hawaii, Straub Hospital and Clinics for adult burn patients and Kapiolani Medical Center for Women and Children for burn patients 14 and under. Straub opened in 1983, the Straub Burn Unit has three critical care burn beds and serves both Hawaii and the Pacific Region. The developing trauma system recognizes the Straub Burn Unit and Kapiolani Medical Center for Women and Children as key public health resource on both a day-to-day basis and in the event of a mass casualty incident. As the statewide trauma system develops, inclusion of the Straub Burn Unit in planning and resource development will be key to the success of the system. Pediatric Burn patients ages zero to fourteen will be treated at Kapiolani Medical Center for Women and Children in their Pediatric Burn Program that is part of the Trauma Program.

Trauma Rehabilitation

The person with disabilities from injury has special needs compared with other individuals requiring rehabilitation. Multiple trauma is a relatively new area of rehabilitation. Specialists have traditionally been trained to treat single systems but trauma can affect many systems at once: musculoskeletal, neurological, and psychological. Sudden injuries cause very different kinds of challenges than elective surgeries do. Multiple trauma patients often need not only physical rehabilitation but also psychosocial supports – and time to work through the emotional trauma. Up to 25% of patients develop Post-traumatic Stress Disorder. The nature and complexity of multiple injuries requires coordination of care as more specialists become involved. Although younger in age than the average rehabilitation patient, the trauma patient has many more issues related to return to work or school and previous family and community roles. Rehab therapy focuses on helping patients return to a quality of life as similar as possible to what they had before their injuries.

Rehabilitation Hospital of the Pacific is the only acute care medical rehabilitation organization serving Hawaii and the Pacific. It consists of 100 in-patient beds and seven outpatient clinics on Maui, Hawaii and Oahu. Neighbor Island residents requiring intensive in-patient rehabilitation must receive that care on Oahu, away from their friends and family support systems. Future planning for trauma system development must include the rehabilitation component and input from the physicians and administration at Rehabilitation Hospital of the Pacific will be contribute to the success of a plan to improve the care delivery system for injured persons in Hawaii

Funding

The goal of the DOH is to systematically distribute trauma special care funds to subsidize the cost of providing trauma care to injured patients and to encourage improvements in the resources available to injured patients. Only designated trauma centers and trauma support facilities may participate in the trauma care grants.

Funding for the development and operation of a comprehensive state trauma system has been established through the Trauma System Special Fund. Supported primarily through a tax on cigarettes, the fund is to be used to subsidize the documented costs for the statewide trauma system including but not limited to the costs of under-compensated and uncompensated trauma

care incurred by hospitals and costs incurred by hospitals providing care to trauma patients to maintain on-call physicians for trauma care.

In FY 2009, funds were encumbered to subsidize some of the costs incurred by the state's only verified trauma center, The Queen's Medical Center, to support the development of Level III Trauma Centers throughout the state, the development of a statewide trauma registry, and the development of a statewide trauma program within the Department of Health.

For FY 2010 and beyond, the intent of the DOH is to expend the funds in four separate categories:

1. Trauma Patient Care Grants
2. Trauma Participation Grants
3. Trauma Development Grants (to include workforce education)
4. Trauma System Administration

Patient Care Grants will be paid to trauma facilities to offset the costs of un-compensated and under-compensated trauma care provided to patients and the costs incurred by hospitals to maintain on-call physician rosters to provide trauma care.

Participation Grants address the costs of participating in the Hawaii State Trauma System as a trauma center, and are meant to assure a minimum level of regular funding every year. These costs can include equipment, training, supplies, and staffing.

Development Grants are intended to be distributed for specific areas needing funding such as equipment purchase to facilitate trauma care, physician recruitment and retention, and workforce education. Development Grants may also be utilized for creation of a trauma research programs.

Administration includes the cost of trauma program staff and infrastructure for facilities. To date, state trauma program staff consists of the trauma coordinator and the trauma accountant.

System Evaluation

The purpose of trauma systems is to reduce overall morbidity and mortality from injuries. A regular analysis of trauma data entered into the trauma registry is planned for evaluation of the clinical care of trauma patients.

The trauma system is fortunate to have guidelines and benchmarks developed by Health Resource Services Administration (HRSA) entitled Model Trauma Systems Planning and Evaluation. Contained in this document are 113 benchmarks for assessment of the statewide trauma system. A self-assessment should be done annually by trauma staff with the results reported to HTAC and priorities for the coming year established. It is anticipated that a repeat ACS Trauma Systems Consultation will be done within the next five years for an independent analysis of the status of the statewide trauma system.

The ACS Trauma Systems Consultation Report (Appendix E) was received in April 2017. Listed below are the identified critical areas for improvement found in the report under Priority Recommendations. HTAC will take lead on the coordination and execution of plans to correct identified areas.

Injury Epidemiology

1. Produce an annual Trauma System report that includes data from the pre-hospital setting, trauma registry, vital records and hospital discharge data

- a. Individual trauma center – patient volume
 - i. Full Trauma team activations
 - ii. Modified Trauma team activations
 - iii. Trauma consult volumes
- b. ED disposition – patient volume
 - i. ED to OR
 - ii. ED to ICU
 - iii. ED to floor
 - iv. Discharged/AMA
 - v. Transfer
- c. Mechanism of Injury
 - i. Blunt
 - ii. Penetrating
 - iii. Top e codes for hospital admission and mortality
- d. Drug Intoxication
 - i. EtOH
 - ii. Meth
 - iii. THC
- e. Specialized patient populations
 - i. Pediatric (age <15)
 - ii. Pregnant
 - iii. Geriatric (age ≥ 65)
 - iv.
- f. Injury Severity
 - i. Mild (0-9)
 - ii. Moderate (10-16)
 - iii. Severe (>16)
- g. Outcomes
 - i. Mortality
 - ii. Length of stay
- h. Performance Improvement metrics
- i. Injury Prevention and Outreach efforts

Assessment: Utilize current data collected through the State Trauma Registry to generate analysis. Additional available data elements (based on NTDB required fields) can be included. Data not currently collected could be added to the required fields but

would require extended time for development of standard definitions, acceptable field values, data hierarchy for extraction, education, and implementation.

Goals: Develop an Annual Trauma System report that reflects the value of our Trauma System

Timeline: Allow centers until end of February 2020 to close charts for calendar year 2019. In March 2020, generate preliminary report for review at April 2020 HTAC. Distribute final report to stakeholders.

Lead: DOH EMSIPSB and DOH TMD panel

Value: High

Feasibility: High

Statutory Authority and Administrative Rules

1. Develop and implement rules governing the Trauma System, including but not limited to:

- a. Structure, governance, and reporting structure of the HTAC
- b. Periodic review and update of the trauma plan
- c. Process for determining priorities in distribution of trauma funds to support state-wide Trauma System development and sustainability
- d. Field triage and ambulance destination
- e. Designation of trauma centers based on need

Assessment: Revised Trauma System Plan currently being developed; review/revise every 3 years. Field triage and ambulance destination covered by EMS standing orders and reviewed regularly. DOH EMSIP currently determines trauma center designation and funding distribution; inclusion of the State TMD panel can be considered. HTAC charter in place. HTAC is an advisory body to the DOH EMSIP; formal policies for structure and governance need to be developed.

Goals: Develop policies and procedures for HTAC

Timeline: TBD

Lead: DOH EMSIPSB and HTAC

Value: High

Feasibility: Moderate

2. Create a broadly representative sub-council of the HTAC that will work in an advisory capacity with the Emergency Medical Services Injury Prevention Systems Branch to review all statutes and regulations pertaining to trauma with a focus on updating, developing, and/or revising sections needing attention

Assessment: As stated

Goals: Develop a HTAC legislative sub-committee to collaborate with Kari Benes

Timeline: Immediate

Lead: HTAC and DOH legislative lead

Value: High

Feasibility: High

System Leadership

1. Develop a process, led by the HTAC in its advisory role, to create a shared vision for the future of trauma care and Trauma System maturation in Hawaii, utilizing input from all stakeholders

Assessment: Beyond a mission statement, a shared vision with deliverables HTAC members can commit to. Need to build trust within the Trauma System.
Goals: Discuss and develop this shared vision for our Trauma System.
Timeline: Immediate
Lead: HTAC
Value: High
Feasibility: High

2. Restructure HTAC as a formalized advisory committee to the DOH EMSIPSB (EMSAC may serve as a model for drafting this section)

Assessment: Chair of HTAC should be elected by the committee, with a fixed term of office, and should not be an employee of the branch. Consider use of subcommittees to address specific system components and to broaden stakeholder involvement.
Goals: Expand current HTAC Charter modeling after Title 19 321 (221-232)
Timeline: HTAC subcommittees developed and HTAC Chair now elected by committee in accordance with HTAC charter. HTAC Chair is not-employed by DOH EMSIPSB. Reporting structure of HTAC to DOH addressed in section 2 above.
Lead: DOH EMSIPSB
Value: High
Feasibility: Moderate

Lead Agency

1. Create full-time dedicated staff for positions of State Performance Improvement coordinator and State Trauma Registrar/Data Manager

Assessment: Would be of great benefit to assist with and ensure data integrity and analysis in the State Trauma registry as well as coordinate system improvement. Managed by DOH EMSIPSB. Assessment of available funding followed by development of job descriptions, posting, hiring in accordance with State regulations.
Goals: Hire a State Trauma PI coordinator and a State Trauma Registrar/Data Manager
Timeline: TBD
Lead: DOH EMSIPSB
Value: High
Feasibility: Low

Trauma System Plan

1. Assemble a multidisciplinary trauma task force, under the HTAC, to review, and suggest updates to the draft FY 2016 Trauma System Plan

Assessment: Ensure the plan is consistent with the current standards of trauma care. Align the plan with the current statutes and all Trauma System protocols. Complete the

review, update, and attain approval of the report in a timely manner. Include a grid for goals, objectives, timelines, and responsible person/ lead. Disseminate the plan to all Trauma System stakeholders

Goals: Develop and maintain Hawaii Trauma System Plan
Timeline: present current draft at November 2019 HTAC
Lead: HTAC System Plan subcommittee
Value: High
Feasibility: High

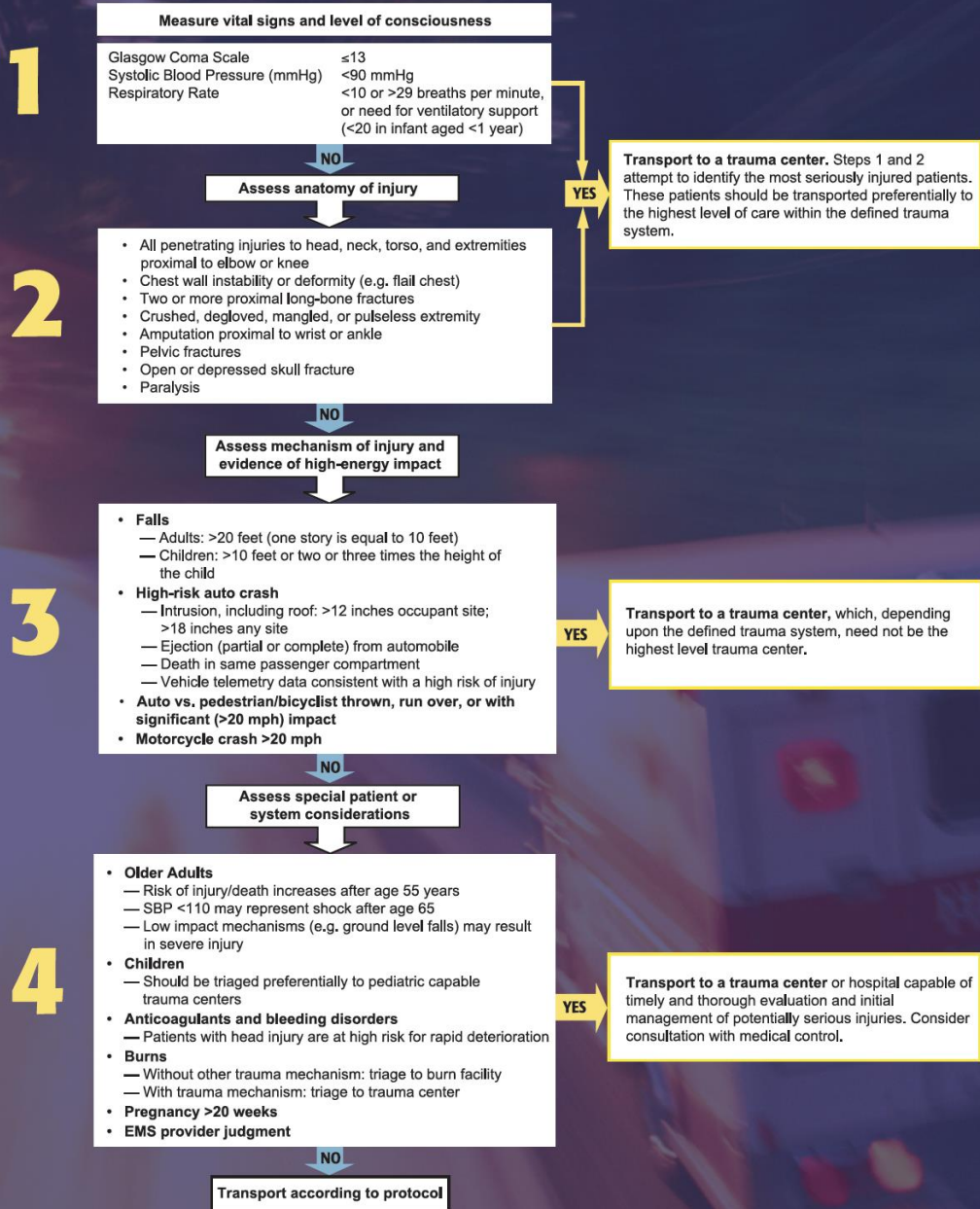
System Integration

- 1. Explore creative options, including tele-medicine and other technologies, to provide consultation, follow-up care, and rehabilitation to enable more patients to remain on their home island**

Assessment: Telemedicine legislation in place with potential to build off existing stroke equipment/platform.
Goals: Need to recruit specialists willing to provide telemedicine consultations
Timeline: TBD
Lead:
Value: High
Feasibility: High
Need to recruit specialist willing to provide telemedicine

Appendix A

2011 Guidelines for Field Triage of Injured Patients



When in doubt, transport to a trauma center.

Find the plan to save lives, at www.cdc.gov/FieldTriage

Amendment to current Oahu Ambulance Transportation Guidelines – Section III

G. Trauma – Field Triage of the Injured Patient

1. Triage of the Trauma patient will follow the Categories 1-4 as outlined below.
2. Department of Defense (DOD) trauma patients include active duty, retirees, and their dependents.
3. Category 1 Adult and Pediatric
 - a. Non-DOD Adult and Pediatric trauma patients are transported to The Queen’s Medical Center Punchbowl (Level I).
 - b. DOD Adult and Pediatric trauma patients are transported to the nearest Level I or II trauma center
 - i. Metropolitan and East Oahu to The Queen’s Medical Center Punchbowl (Level I)
 - ii. West, Central, Northshore Oahu to Tripler Army Medical Center (Level II).
4. Category 2 Adult and Pediatric
 - a. Non-DOD Adult and Pediatric trauma patients are transported to The Queen’s Medical Center Punchbowl (Level I).
 - b. DOD Adult and Pediatric trauma patients are transported Tripler Army Medical Center (Level II).
5. Category 3
 - a. Adult
 - i. Non-DOD trauma patients are transported to either Pali Momi Medical Center (Level III) or The Queen’s Medical Center Punchbowl (Level I).
 - ii. DOD patients are transported to Tripler Army Medical Center (Level II).
 - b. Pediatric (age 14 and under)
 - i. Non-DOD trauma patients are transported to either Kapiolani Medical Center for Women and Children (Level III) or The Queen’s Medical Center Punchbowl (Level I).
 - ii. DOD trauma patients are transported to Tripler Army Medical Center (Level II).
6. Category 4
 - a. Adult
 - i. Non-DOD trauma patients may be transported to any 911 receiving facility.
 - ii. DOD trauma patients are transported to Tripler Army Medical Center (Level II).
 - b. Pediatric
 - i. Non-DOD trauma patients are transported to either Kapiolani Medical Center for Women and Children (Level III) or The Queen’s Medical Center Punchbowl (Level I).
 - ii. DOD trauma patients are transported to Tripler Army Medical Center (Level II).
7. Trauma patients in cardiac arrest:
 - a. Trauma patients in asystole on scene may be pronounced on scene.
 - b. Trauma patients in PEA or other non-perfusing rhythms should be transported to the nearest facility.

TABLE 4: TRAUMA FIELD TRIAGE GUIDELINES			
CATEGORY	PATIENT TYPE	NON-DOD	DOD
1	Adult & Pediatric	QMC-PB (Level I)	QMC-PB (Level I) TAMC (Level II)
2	Adult & Pediatric	QMC-PB (Level I)	TAMC (Level II)
3	Adult	QMC-PB (Level I) PM (Level III)	TAMC (Level II)
	Pediatric	QMC-PB (Level I) KMCWC (Level III)	
4	Adult	Any 911 receiving facility	TAMC (Level II)
	Pediatric	KMCWC (Level III)	
Unstable for transport, impending respiratory failure or cardiac arrest	Adult & Pediatric	Nearest appropriate ED	

Pediatric = age 14 years old and younger

QMC-PB = The Queen's Medical Center Punchbowl (Level I)

TAMC = Tripler Army Medical Center (Level II).

KMCWC = Kapiolani Medical Center for Women and Children (Level III)

PM = Pali Momi Medical Center (Level III)

Appendix B



TRAUMA REGISTRY INCLUSION CRITERIA

State Trauma Program
Emergency Medical Services and Injury Prevention System Branch
Hawaii State Department of Health

Thursday, August 31, 2017

TRAUMA REGISTRY INCLUSION CRITERIA Effective September 1, 2017

Patients to be included in the State of Hawaii Trauma Registry

Data on patients meeting the criteria listed in this document is to be collected by Level I-III Trauma Centers and placed into the Hawaii Trauma Registry.

A trauma patient is defined as a patient who:

- Presents **within 72 hours** from the injury date **or**
- Receives initial treatment for injury despite injury date (institutional judgment) has an ISS > 9

And requiring medical care with a **principal diagnosis** of trauma with **at least one** of the following injury diagnostic codes:

International Classification of Diseases, Tenth Revision (ICD-10-CM):

- **S00-S99 with 7th character modifiers of A, B, or C ONLY** (initial encounter²)
- **T07** (unspecified multiple injuries)
- **T14** (injury of unspecified body region)
- **T20-T28 with 7th character modifier of A ONLY** (burns – initial encounter)
- **T30-T32** (burn by TBSA percentages)
- **T79.A1-T79.A9 with 7th character modifier of A ONLY** (traumatic compartment syndrome – initial encounter)
- **T33-T34, T68, T69** (Frostbite)
- **T75.0** (Effects of lightning)
- **T75.4** (Electrocution)

AND MUST INCLUDE ONE OF THE FOLLOWING IN ADDITION TO (ICD10-CM S00-S99, T07, T14, T20-T28, T30-T32 and T79.A1-T79.A9):

- Are transferred into or out of an acute care facility, regardless of injury severity, length of stay at the transferring facility, or mode of transfer (by EMS or by private vehicle).
- Information should be placed in the state registry from both the transferring facility and the receiving facility for any patient transferred (even if the patient is discharged from the ED of the receiving facility).
- All patients (any diagnosis) for whom the full or modified Trauma Resuscitation Team was activated
- Have an ED disposition = OBS and either (a) an Injury Severity Score (ISS) >9 or (b) a hospital stay of \geq 24 hours from the time of arrival at the emergency department. Trauma patients are defined as patients remaining at your facility for the treatment or diagnosis of trauma.
- Have an ED disposition = FLOOR, ICU, TELE, STEPDOWN, ADMIT, OR, or DIRECT
- Are admitted for missed diagnoses, complications, failed conservative management or iatrogenic injuries identified after a previous hospital encounter. For these unplanned returns, the original ED visit or admission could have been at your facility or at another facility.
- The readmission should occur within 30 days of when the patient was last discharged.
- Die anywhere in the hospital independent of hospital admission or hospital transfer status (deaths in the emergency department, DOA deaths, deaths in the OR, deaths as an inpatient).
- Patients who are “found down” should be assumed to be a trauma patient unless proven otherwise.
- All pediatric (age 0 through 14 or <15) trauma patients admitted to your facility or suspected child abuse.
- Admission time is from time admit order is written in ED to discharge out of hospital (physically leaving hospital)

Excluding the following isolated injuries:

- Cellulitis resulting from an injury not previously treated
- Drowning and near drowning (If a qualified injury diagnosis is made, then include)³
- Hanging and near hanging (If a qualified injury diagnosis is made, then include)³
- Hypothermia (If a qualified injury diagnosis is made, then include)³
- Envenomation
- Smoke inhalation (If a qualified injury diagnosis is made, then include)³
- Same level fall in patients > 65 with isolated hip fracture
- Planned readmits

ICD-10-CM

- **S00** (*Superficial injuries of the head*)
- **S10** (*Superficial injuries of the neck*)
- **S20** (*Superficial injuries of the thorax*)
- **S30** (*Superficial injuries of the abdomen, pelvis, lower back and external genitals*)
- **S40** (*Superficial injuries of shoulder and upper arm*)
- **S50** (*Superficial injuries of elbow and forearm*)
- **S60** (*Superficial injuries of wrist, hand and fingers*)
- **S70** (*Superficial injuries of hip and thigh*)
- **S80** (*Superficial injuries of knee and lower leg*)

- **S90** (*Superficial injuries of ankle, foot and toes*)

Late effect codes, which are represented using the same range of injury diagnosis codes but with the 7th digit modifier code of D through S, are also excluded.

CLARIFICATIONS AND EXAMPLES

1. "Principal diagnosis of trauma" means that the primary reason for the patient's admission. Patients admitted with a medical principal diagnosis or social admits are not to be included.
2. Initial encounter is defined as active treatment, evaluation and treatment by new physician.
3. Patients with a mechanism of injury of drowning/near drowning, hypothermia, smoke inhalation or hanging/near hanging are excluded from the State Trauma Registry, unless other qualifying injuries are present.
4. Transfer means a patient was sent directly from one facility to another for continuation of care regardless if EMTALA paperwork is present or not.
5. Transfers do not include patients who were 1) sent home from an acute care facility and told to return to a second facility for continued care or for a scheduled operative procedure 2) sent from a private physician's office, an ambulatory surgery center or urgent care clinic
6. For State Trauma Registry purposes Waianae Coast Comprehensive Healthcare Center transfers will be considered an interfacility transfer.
7. It is important that the transferring facility and the receiving facility contact each other and share the registry trauma number to facilitate the linking of all records that resulted from the same person-event.
8. "OBS" refers to observation status which is a type of outpatient status when patients are cared for in the hospital setting. It does not imply a location within the hospital.
9. Patients transported from the ED to the OR should be included in State Trauma Registry, regardless of the length of stay or admission status (e.g., outpatient/same day surgery, observation, inpatient, etc.).
10. Readmissions/re-encounters are defined as patients seen/treated/discharged from the ED or inpatient setting and then returns to at a later date for a missed diagnosis, complication, failure of conservative management or iatrogenic injury. Patients are not required to receive care at the same facility for this definition to apply.
11. Surgical removal of a foreign body, regardless of orifice, meets State Trauma Registry inclusion criteria only if there is a subsequent anatomic injury.

Appendix C

Trauma Plan Definitions

ImageTrend Trauma Registry - The trauma registry program used by the State of Hawaii and all participating and designated trauma facilities in Hawaii.

Credentialing – Approval of a physician as a member of the trauma team based on a review of the individual’s training and experience by the trauma service director.

Designation – a formal determination of the Department of Health that hospitals or health care facilities are capable of providing trauma services within a trauma system.

Director – The Director of the Department of Health or the assigned designee. The director is the legally responsible entity for the statewide trauma system

EMS Providers

Immediately Available – Present within 5 minutes of the arrival of the injured patient. It is presumed that the team members with this requirement are in-house, and is tracked by a quality improvement indicator with the minimum acceptable compliance of 80%.

Injury Severity Score (ISS)—the sum of the squares of the Abbreviated Injury Scale (AIS—an anatomic severity scoring system) scores of the three most severely injured body regions. This is a widely accepted process for quantifying severity of injury based on discharge diagnoses.

Inter-facility Transfer – A facility’s medical staff may determine that the injured patient’s needs cannot be met by the facility. The patient is then transferred to a facility able to meet the patient’s needs. The process is based on pre-determined criteria and formal transfer agreements.

Level I Trauma Center – provides definitive comprehensive surgical and medical care for multi-system trauma patients. Trauma-trained emergency physicians and registered nurses are in-house and immediately available to the trauma patient within 5 minutes to initiate resuscitation and stabilization. A trauma trained general surgeon is immediately available to direct patient care. A wide range of specialists, diagnostic capabilities and support services are available. A Level I center must conduct applicable trauma research and injury prevention activities, provide statewide professional and community education and consultative community outreach services. A Level I facility must be verified by a survey conducted by the American College of Surgeons. A Level I facility must be designated by the State of Hawaii, DOH EMS IPSB.

Level II Trauma Center – provides definitive comprehensive surgical and medical care for multi-system trauma patients. Trauma trained emergency physicians and nurses are immediately available, and a general surgeon with trauma credentials is in the department upon trauma patient arrival with adequate notification from the field. The maximum acceptable response time is 15 minutes, tracked from the patient’s arrival. The program must demonstrate that the surgeon’s presence is in compliance at least 80% of the time. A wide range of specialists, diagnostic

capabilities and support services are available. A Level II center must conduct injury prevention activities, and provide for professional and community education and consultative community outreach services. A Level II facility must be verified by a survey conducted by the American College of Surgeons. A Level II facility must be designated by the State of Hawaii, DOH EMS IPSB.

Level III Trauma Center – should have the capability to initially manage the majority of injured patients and have transfer agreements with a Level I or Level II trauma center for patients that exceed their resources. A Level III facility must have continuous general surgery coverage. Trauma trained emergency physicians and nurses must be immediately available for resuscitation. The trauma credentialed general surgeon must be promptly available to the resuscitation. It is expected that the surgeon will be present in the resuscitation area upon trauma patient arrival with adequate notification from the field. The maximum acceptable response time is 30 minutes, tracked from patient arrival. The program must demonstrate compliance 80% of the time. Specialists may be available and standard diagnostic and support services are provided. Guidelines for patient transfer or retention should be well-defined. Injury prevention and control, outreach activities to the local community and education programs for healthcare providers should be part of a Level III trauma program. A Level III facility may opt to seek verification from the American College of Surgeons or the state DOH. A Level III facility must be designated by the State of Hawaii, DOH EMS IPSB.

National Trauma Data Bank (NTDB) - The NTDB is the largest aggregation of trauma registry data ever assembled. It contains over 2 million records from trauma centers in the U.S. and Puerto Rico. The goal of the NTDB is to inform the medical community, the public, and decision makers about a wide variety of issues that characterize the current state of care for injured persons.

National Trauma Data Standard (NTDS) – A uniform set of trauma registry variables and associated variable definitions to be used when entering data into the NTDB.

Promptly Available – Present within 30 minutes of the arrival of the injured patient. Tracked by a quality improvement indicator with acceptable compliance ≥ 30 minutes. In-house call is not necessary providing that the response time meets the indicator criteria.

Trauma Registry – database to provide information for analysis and evaluation of the quality of patient care, including epidemiologic and demographic characteristics of trauma patients.

Trauma Support Hospital – Some hospitals, due to the specialized services that they provide (pediatrics or burns, for example) may receive injured patients in transfer from other facilities including trauma centers. Hospitals that agree to take injured patients in transfer from other facilities will be eligible to receive a proportionate share of the trauma care grants based upon the same formula used for trauma centers. These hospitals must also contribute data to the trauma registry.

Trauma Trained Nurse – Education requirements to be determined by the HTAC and the DOH.

Trauma Trained Physician – Education requirements to be determined by the HTAC and the DOH

Under-triage – severely injured patients are transported to lower level trauma centers or non-designated hospitals.

Appendix D

Hawaii Trauma Advisory Council

Charter

Injury, the leading cause of death and disability in those under 45, can be positively impacted by the implementation of a comprehensive statewide system of response. Act 305, Hawaii Session Laws 2006, established the trauma special fund and directed the Department of Health to use these funds to develop, implement and operate a comprehensive statewide trauma system designed to reduce death and disability from injury across the state. In fulfilling that responsibility, the Legislature directed the Department to convene meetings as follows:

SECTION 6. (a) The department of health shall convene ad hoc committees to advise the department in all matters related to trauma care, including system standards, appropriate expenditure of the trauma system special fund, and system performance and evaluation criteria.

(b) Members of the ad hoc committees shall include members of the state EMS advisory committee and may invite participation statewide from practicing trauma surgeons and other trauma specialty physicians and nurses, pre-hospital personnel, hospital administrators, third party payors and other interested parties from all counties.

After legislation directing tobacco taxes into the trauma special fund and the first appropriation of funds in fiscal year 2009, the Department of Health Emergency Medical Services and Injury Prevention System Branch (DOH-EMSIPSB) established the Hawaii Trauma Advisory Council (HTAC) to fulfill Section 6 of Act 305 and guide trauma system development. Since that time HTAC has played an instrumental role in the implementation of a comprehensive statewide trauma system. This Charter will set forth more specifically the operating procedures that will govern HTAC in the future.

Article I

Vision

The Hawaii Trauma System's vision is to ensure that all trauma patients within the state of Hawaii receive quality comprehensive trauma care as determined by national trauma standards

Article II

Mission

Reduce the burden of trauma in Hawaii through collaborative programs of injury prevention, optimal treatment, research and education.

Article III

Duties of the Council

HTAC will provide regular meetings inclusive of a broad and representative array of multidisciplinary trauma stakeholders to disseminate information and advise the Department on all matters related to its trauma programs and services including but not limited to:

- Identify and make recommendations regarding trauma service needs across the state.

- Recommend appropriate standards and processes for verification and designation for trauma centers in Hawaii based on standards set by the American College of Surgeons Committee on Trauma (ACS-COT).
- Review and make recommendations for trauma pre-hospital triage and transfer guidelines consistent with ACS-COT recommendations and statewide resources.
- Evaluate trauma registry reports and make recommendations for improvements to the state trauma registry.
- Review and approve proposed statutes, rules or other regulations pertinent to trauma system operations.
- Evaluate Hawaii’s trauma system performance against HRSA Model Trauma System benchmarks and ACS-COT system standards. Make recommendations for system improvements and regularly re-evaluate progress against benchmarks.
- Evaluate a variety of sources of data to assess statewide performance outcomes leading to suggestions for statewide improvement initiatives.
- Conduct multi-facility case reviews to identify patient care challenges, exchange best practices among trauma care providers, and identify opportunities to improve patient care and the trauma system.
- Review programs and make recommendations regarding trauma education for the system workforce.
- Review trauma sub-specialty care across the state and identify opportunities for greater access to specialists.
- Review and make recommendations to the Department regarding the allocation and expenditure of funds for the development and improvement of the statewide trauma system.
- Regularly review and make recommendations to update the Hawaii Trauma System Plan
- Advocate to the Legislature and the public for continued support and resources for a comprehensive statewide trauma system.

Article IV

Membership

HTAC promotes an inclusive approach for the Hawaii trauma system and opens meetings to individuals throughout the state interested in achieving its mission. As set forth by HRSA Model System planning and ACS-COT guidance, a successful trauma system is supported by a broad coalition of engaged stakeholders. Given the broad responsibilities of HTAC, inclusion of a variety of perspectives is essential for success but must be balanced with the need to limit the number of voting members for effective conduct of business.

The input from stakeholders in each component is needed to assure a comprehensive system. The following groups are encouraged to participate though they may not have voting rights. Neurosurgeons, Orthopedic Surgeons, Emergency Physicians (ACEP), Burn specialists,

Rehabilitation specialists and other specialists, private ground and air ambulance providers, and other agencies such as the Hawaii Emergency Management Agency, John A. Burns School of Medicine, Healthcare Association of Hawaii, Emergency Nurses Association, Hawaii Paramedic Associations, Office of Rural Health, Emergency Medical Services for Children, Injury Prevention Advisory Committee, Keiki Injury Prevention Coalition, Governor's Traffic Safety Committee, Traumatic Brain Injury Association, government officials from the Legislature, third party payers and consumers.

Representatives from trauma centers that are designated in the comprehensive statewide trauma system are expected to attend HTAC meetings whether they are voting members or not.

Voting members represent a subset of key stakeholders who are responsible for the achievement of HTAC responsibilities with the assistance of non-voting members. Sub-committees of HTAC may include any interested parties or content experts with the exception of case reviews which may be closed according to system rules.

The voting membership of HTAC is comprised of a multidisciplinary membership representative of both rural and urban trauma perspectives as follows:

- The State Emergency Medical Services Advisory Committee (EMSAC) Chair shall be an ex officio voting member. In addition to the Chair, EMSAC shall nominate a representative from each county provided that at least one is an emergency physician. Should an EMSAC nominee be unable to complete their term EMSAC shall nominate someone to take their place.
- Each state designated trauma center/receiving facility (Tripler included) will have one voting member who shall be either the Trauma Medical Director or Trauma Program Manager. Should the voting member leave their position prior to the end of the term the counterpart position (Medical Director or Trauma Program Manager) shall become the voting member. Should both of those positions be unfilled, the facility may designate another person as a temporary representative for a limited time with the Chair's approval.
- The Chair and Vice Chair shall be elected by the above named voting members.

Proxy votes shall not be allowed except by pre-approval of the Chair.

Proxy votes shall not be allowed except by pre-approval of the Chair.

The terms of the voting members shall be two years. A voting member shall be limited to not more than two consecutive terms, but may once again become a voting member after abstaining for one term.

A voting member who has more than two consecutive unexcused absences or more than two unexcused absences in a year shall be deemed to have vacated their membership and shall be replaced via the mechanism for initial voting member selection.
Employees of the Department of Health may not serve as voting members.

Article V

Officers and Executive Administrator

The HTAC shall elect a Chairperson and a Vice-Chairperson who will serve two year terms. A non-elected Executive Administrator will provide logistical support to HTAC.

The Chairperson will preside at HTAC meetings, monitor conduct and enforce policies during meetings. The Chairperson will give final approval to the agenda for each meeting and will be responsible to ensure that meetings address the major duties of HTAC. The Chairperson will solely be responsible for granting excused absences to voting members and approving proxy votes. The Chairperson will also be responsible for official communication of any recommendations to the Department or other entities voted on by HTAC.

The Vice-Chairperson will preside at HTAC meetings in the absence of the Chairperson and perform other duties the Chairperson may request.

The Executive Administrator for HTAC is a non-elected officer of HTAC who will be the Department of Health EMSIPSB Branch Chief or designee. The Executive Administrator shall:

- Maintain a list of HTAC invitees and voting members including participants in subcommittees
- Notify HTAC members of the time and place of HTAC meetings and meetings of the HTAC sub-committees
- Record, maintain and distribute accurate minutes of HTAC quarterly meetings and special meetings (not responsible for subcommittee minutes);
- Distribute the minutes of the previous meeting, the agenda of an upcoming meeting and any supplemental materials approved by the Chairperson pertaining to such meetings at least ten working days prior to the meeting date
- Track attendance at HTAC meetings and report any unexcused absences of voting members to the Chairperson.
- Provide travel support for meeting attendance to voting members whose travel is not otherwise supported.

In the absence of both the Chairperson and Vice-chairperson at any meeting the voting members present shall elect a chair to serve for that meeting only.

New officers will be elected every two years.

Article VI Meetings

- The Council shall meet at least quarterly at the call of the Chairperson.
- The presence of 7 voting members at HTAC constitutes a quorum.
- Additional meetings may be added at the discretion of the Chairperson and/or requested by at least 7 voting members of HTAC.

Article VII Subcommittees and Ad Hoc Committees

The business of the HTAC will be conducted through regular quarterly meetings of the full Council but also will utilize smaller groups established to provide guidance to HTAC, the Department, or both. Sub-committees that meet regularly are established to address specific areas of responsibility under the HTAC duties. Subcommittees may include non-members but shall include at least one voting member of HTAC. Subcommittees may be deleted or added by majority vote of HTAC. HTAC may also establish Ad Hoc committees to address specific issues or tasks. These committees are established and dissolved as needed to further the business of HTAC.

Article VIII Voting

Voting on election of members, officers and official recommendations of HTAC to the Department or other entities shall require a quorum and be by majority vote of those present. No proxy or absentee voting shall be allowed except under special circumstances with the approval of the Chairperson. In any instance in which a majority vote is called for the Chairperson may call for a show of hands and such voting method shall determine the result of the vote. Or the Chairperson may decide a written ballot is more appropriate than a show of hands. Any voting member may request the use of secret ballot on any matter called for a vote.

ARTICLE IX Amendment of Charter

This charter may be amended at a meeting of the HTAC by majority vote provided that such amendment was submitted to the Chairperson and the Executive Secretary and remitted to all members at least ten working days prior to the meeting at which such amendment is to be offered. Adopted amendments shall take effect immediately upon adoption.

ARTICLE X
Parliamentary Authority

The latest edition of ROBERT'S RULES OF ORDER NEWLY REVISED shall govern the Council, its committees, subcommittees and ad hoc committees wherever they are applicable and not inconsistent with other provisions of this Charter, Hawaii Revised Statutes and Hawaii Administrative Rules.

Appendix E

ACS TSC Report

PRIORITY RECOMMENDATIONS

Injury Epidemiology

- Produce an annual Trauma System report that includes data from the pre-hospital setting, trauma registry, vital records and hospital discharge data
- Aggregate by geographic area, high risk populations and mechanism of injury
- Include injury severity and non-mortality outcome measures
- Develop report section identifying the top e codes for hospital admission and mortality

Statutory Authority and Administrative Rules

- Develop and implement rules governing the Trauma System, including but not limited to:
 - Structure, governance, and reporting structure of the HTAC
 - Periodic review and update of the trauma plan
 - Process for determining priorities in distribution of trauma funds to support state-wide Trauma System development and sustainability
 - Field triage and ambulance destination
 - Designation of trauma centers based on need
 - Create a broadly representative sub-council of the HTAC that will work in an advisory capacity with the Emergency Medical Services Injury Prevention Systems Branch to review all statutes and regulations pertaining to trauma with a focus on updating, developing, and/or revising sections needing attention

System Leadership

- Develop a process, led by the HTAC in its advisory role, to create a shared vision for the future of trauma care and Trauma System maturation in Hawaii, utilizing input from all stakeholders
- Restructure HTAC as a formalized advisory committee to the EMSIPSB of DOH (Emergency Medical Services Advisory Council may serve as a model for drafting this section) ○ Chair of HTAC should be elected by the committee, with a fixed term of office, and should not be an employee of the branch
- Consider use of subcommittees to address specific system components and to broaden stakeholder involvement

Lead Agency

- Create full-time dedicated staff for positions of state Performance Improvement Coordinator and State Trauma Registrar/ Data Manager
- Develop comprehensive job descriptions for trauma-related positions within EMSIPSB

Trauma System Plan

- Assemble a multidisciplinary trauma task force, under the HTAC, to review, and suggest updates to the draft FY 2016 Trauma System Plan
- Ensure the plan is consistent with the current standards of trauma care
- Align the plan with the current statutes and all Trauma System protocols
- Complete the review, update, and attain approval of the report in a timely manner
- Include a grid for goals, objectives, timelines, and responsible person/ lead
- Disseminate the plan to all Trauma System stakeholders

System Integration

- Explore creative options, including tele-medicine and other technologies, to provide consultation, follow-up care, and rehabilitation to enable more patients to remain on their home island

Financing

- Evaluate use of trauma funds and allocate as needed to be sure trauma funds are optimally supporting the future goals and direction established by the updated Trauma System Plan
- Work with the legislature to ensure that a stable funding source for the Trauma System is secured. Funding should be sufficient to support system operation and future development as outlined in the State Trauma System Plan

Prevention and Outreach

- Involve the tourism/ hospitality industry in prevention initiatives

Emergency Medical Services

- Amend EMS Statute to integrate aeromedical services as a vital component of the State Comprehensive Emergency Medical Services System. ○ Authorize DOH to contract for services and bill third-party payers for reimbursement

Definitive Care Facilities

- Determine the optimal level and number of trauma centers, based on population need and system capacity. Metrics might include anticipated volume, available resources, and geography
- Support the development of a Level I or a second Level II trauma center at the facility found to be most appropriate to meet population need as determined by the trauma designation process

- Engage all non-designated acute care facilities in regional and state-wide trauma advisory council activities, including Performance Improvement initiatives.

Disaster Preparedness

- Conduct an assessment of the Trauma System's ability to expand its capacity to respond to MCIs in an all-hazards approach
- Conduct a gap analysis based on the assessment for trauma emergency preparedness

System-Wide Evaluation and Quality Assurance

- Create a Trauma System PI Master Plan, guided by HTAC in its advisory role
- Assemble a multidisciplinary ad-hoc workgroup, drawn from the stakeholder community to expedite completion
- Attain approval within 12 months
- Disseminate this plan to the Trauma System stakeholders

Trauma Management Information Systems (MIS)

- Establish the position of State Trauma Registrar. Responsibilities should include:
 - Data validation
 - User support for registry use and data entry
 - Ability to create reports for individual centers and at the system level
 - Management of additional data fields for specific system projects
- Consider establishment of a centralized pool of trauma registrars that would be responsible to assist with data entry and report writing at all acute care facilities
- Begin using registry data to look at system performance now. Initial focus might include:
 - Details on patients transferred to higher level of care to ensure timeliness and appropriateness
 - Details on patients kept at Level III centers to compare clinical outcomes to similar patients transferred to higher level centers, either within the state or nationally

Hawaii Trauma System Report

Tiffany Lightfoot RN, MS

Hawaii State Department of Health

Emergency Medical Services and Injury Prevention System Branch

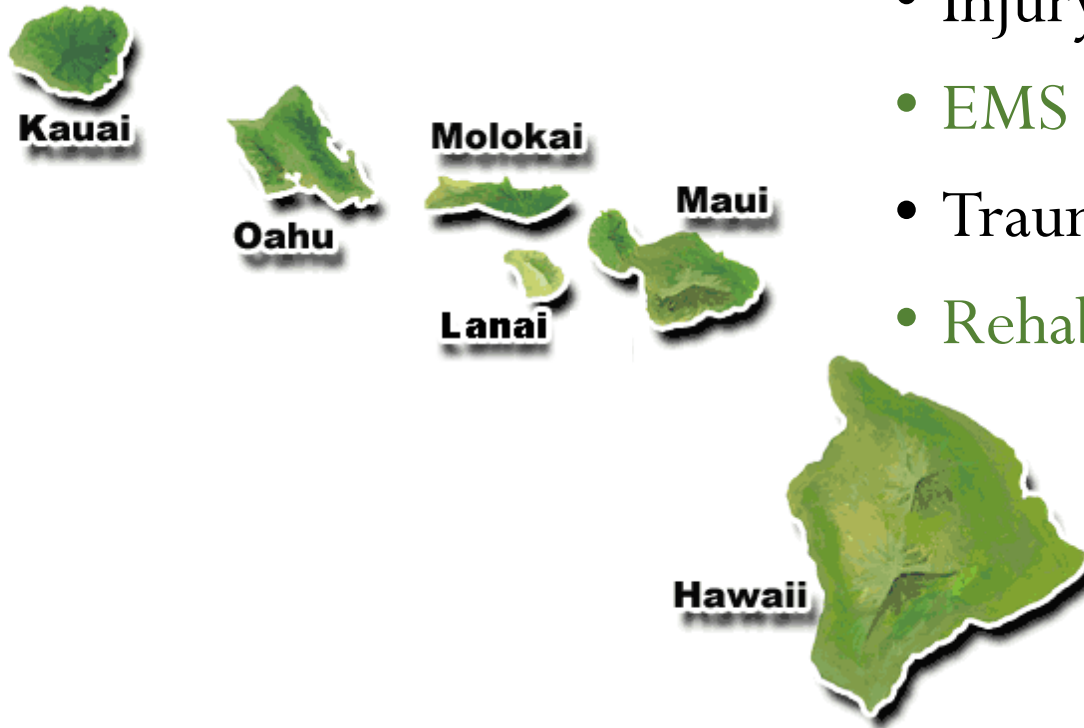
Hawaii State Capitol Room 016

DOH Emergency Medical Services and Injury
Prevention System Branch
Hawaii Trauma Advisory Council

November 1, 2019



Hawaii Trauma System Continuum of Care



- Injury Prevention
- EMS
- Trauma Centers and hospitals
- Rehabilitation

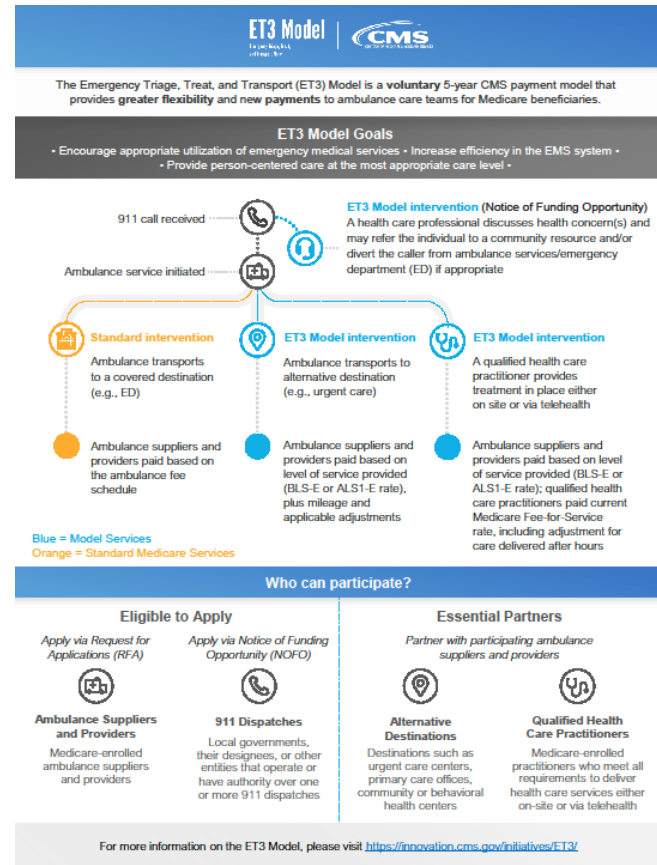
Recent Activities

- National Association of State EMS Officials West Region Meeting: October 1-3, 2019 (Portland, OR)
- National Highway Traffic Safety Administration Hawaii EMS Re-assessment: October 14-18, 2019 (Statewide)
- Maui Memorial Medical Center Level III Trauma Center Survey: October 21-22, 2019 (Maui)



Recent Activities

- Emergency Triage, Treat, and Transport (ET3) Model
Center for Medicare & Medicaid Services
 - 5 year fee schedule
 - Aligned with ACT 140 (HB 1453)





Hawaii EMS Re-assessment

- Last assessment: 1991
- 9-person team (Arizona, Georgia, Idaho, Illinois, Minnesota, Vermont, Washington DC)

NHTSA Recommendations

- Strengths
 - Statewide ALS ambulance services
 - Single electronic medical record system (HEMSIS)
 - Centralized billing
 - Transparency
 - Interdisciplinary teamwork



NHTSA Recommendations

- Opportunities
 - Establish EMS as an essential service
 - Increase EMSIPSB Branch personnel
 - License all EMS personnel regardless of ambulance employment
 - Update EMS administrative rules and scope of practice
 - All EMS agencies document in HEMSYS
 - 911, interfacility, cancellations



NHTSA Recommendations

- Opportunities
 - Trauma
 - Continue with 2017 ACS recommendations
 - Establish single trauma center standard (ACS)
 - Designate Level 4 trauma centers
 - Publish an annual report
 - **Automate EMS/trauma data linkage**
 - **Publish quality metrics**
 - Publish clinical management guidelines (e.g., head injury)



State Trauma Medical Directors

- DOH EMSIPSB Workforce Introductions
 - Dwight Kellicut MD, FACS – Military
 - Michael Hayashi MD, FACS – Adult
 - Sidney Johnson MD, FACS – Pediatrics



Update

- DOH Administrative Rules
 - Trauma Center Designation
 - Draft completed
 - 2/7/20 HTAC public comment
 - Trauma System Special Fund Distribution
 - Draft rules after Trauma Center Designation
 - ACT 140
 - Stakeholder groups identified
 - Drafting rules for EMS treat and no transport, transport to alternate destinations, and community paramedicine



Update

- FY 21 Trauma System Special Fund contract scope of work
 - Include data from all hospitals
 - Clarify injury prevention activity expectations
 - Measurable performance goals
 - Evaluating insurance requirements



2020 HTAC Meetings

0900-1200

- Friday, February 7 (location needed)
- Friday, May 15
- Thursday, August 13
 - Trauma Symposium August 14 and 15
- Friday, November 6



Mahalo and Questions

DOH Emergency Medical Services and Injury
Prevention System Branch
Hawaii Trauma Advisory Council

November 1, 2019

