

Hawaii Injury Prevention Plan 2018-2023

Injury Prevention Advisory Committee

Injury Prevention Control Section



Hawaii State Department of Health

Emergency Medical Services and Injury Prevention System Branch

Dear Community Colleagues,

We are pleased to present you with the *web-based* Hawaii Injury Prevention Plan (HIPP) 2018-2023, that serves as a guide for reducing the eight leading causes of injury in Hawaii. This HIPP builds on the previous Hawaii Injury Prevention Plan 2012-2017 and is the result of a collaborative effort between the Hawaii State Department of Health (DOH), Emergency Medical Services and Injury Prevention System Branch (EMSIPSB); the Injury Prevention Advisory Committee (IPAC); and other community partners. In the gap period between the end of the previous plan and inception of the new plan, the initial plan continued to guide the work of the DOH Injury Prevention and Control Section (IPCS) and community partners.

Here in Hawaii, we have made great strides in preventing injuries through the cooperative efforts of government agencies, voluntary and professional organizations, and numerous other community partners. There is much more we must do, however, to further reduce the burden of injury. Injury prevention remains an under-recognized and under-funded area of public health. Now more than ever, we must leverage our resources to join the best knowledge and practices with strong partnerships to effectively prevent injuries, thereby reducing pain and suffering, and saving Hawaii millions of dollars each year. We must work together to raise public awareness, build community capacity for injury prevention efforts, make changes to the physical environment, and implement policy and organizational practices that prevent injuries.

On behalf of the Injury Prevention Advisory Committee and the Hawaii State Department of Health, we invite you to join us in achieving the recommendations set forth in this plan. Please contact us through: <https://health.hawaii.gov/hipp/>

Working together, we can accomplish what none of us can do alone.

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Injury Prevention is a Public Health Priority in Hawaii

Injuries in Hawaii are responsible for more deaths from the first year of life through age 40 than all other causes combined, including heart disease, stroke, and cancer. Among residents of all ages, injury is the fourth leading cause of death and disability. The vast majority of injuries, however, are non-fatal and can lead to a range of outcomes, including temporary pain and inconvenience, disability, chronic pain, or a complete change in lifestyle.

During an average week in Hawaii:

- 15 residents die from an injury
- 103 are hospitalized
- Nearly 1,640 are treated in emergency departments

While the greatest impact of injury is in human suffering, the financial cost is staggering. In Hawaii, medical treatment for injuries generated nearly \$455 million in hospital charges.

Ten leading causes of death among Hawaii residents, by age group, 2014-2018

	<1	1-14y	15-24y	25-34y	35-44y	45-54y	55-64y	65+y
1	Perinatal conditions 268	Unintentional injuries 43	Unintentional injuries 162	Unintentional injuries 273	Unintentional injuries 266	Malignant neoplasm 723	Malignant neoplasm 2,178	Heart disease 9,961
2	Congenital anomalies 70	Malignant neoplasm 28	Suicide 143	Suicide 188	Malignant neoplasm 220	Heart disease 698	Heart disease 1,520	Malignant neoplasm 8,716
3	Sudden infant death synd. 23	Congenital anomalies 12	Malignant neoplasm 32	Heart disease 83	Heart disease 218	Unintentional injuries 430	Unintentional injuries 460	CVD 3,012
4	Unintentional injuries 17	Homicide 8	Heart disease 22	Malignant neoplasm 71	Suicide 147	CVD 155	CVD 316	Influenza and pneumonia 2,390
5	Heart disease 12	Heart disease 7	Homicide 17	Homicide 24	CVD 53	Suicide 147	Diabetes mellitus 224	Alzheimer's disease 2,109
6	Other resp. diseases 10	Oth. infectious diseases 7	Influenza and pneumonia 7	Injuries of unk. intent 19	Homicide 44	Liver disease and cirrhosis 113	Liver disease and cirrhosis 196	Chronic lower resp. diseases 1,494
7	Septicemia 8	Suicide 5	Congenital anomalies 7	CVD 18	Liver disease and cirrhosis 33	Diabetes mellitus 87	Chronic lower resp. diseases 188	Unintentional injuries 1,077
8	Infectious diseases 5	Oth. Intestine. Infections <5	CVD 6	Liver disease and cirrhosis 15	Diabetes mellitus 30	Influenza and pneumonia 59	Influenza and pneumonia 171	Diabetes mellitus 1,061
9	Homicide <5	Perinatal conditions <5	Diabetes mellitus 5	Diabetes mellitus 13	Injuries of unk. intent 19	Septicemia 47	Suicide 161	Nephritis, nephrotic synd 852
10	CVD <5	CVD <5	Injuries of unk. intent <5	Influenza and pneumonia 11	Influenza and pneumonia 17	Nephritis, nephrotic synd 40	Nephritis, nephrotic synd 104	Parkinson's disease 691

Deaths grouped as recommended by National Center for Health Statistics (http://www.cdc.gov/nchs/data/nvsr/nvsr53/nvsr53_15.pdf).

Injury Prevention is a Public Health Priority in Hawaii

Leading Causes of Injury Mortality and Morbidity among Hawaii Residents¹

	Death Certificates (fatal)			Hospital Admission Records (non-fatal)			Emergency Department Records (non-fatal)		
	Cause ²	# ³	%	Cause	# ⁴	%	Cause	# ⁵	%
1	Suicide	185	25%	Falls	2,592	53%	Falls	24,789	31%
2	Falls	142	19%	Suicide	343	7%	Striking ⁶	13,414	17%
3	Poisoning	136	18%	Car occupant	314	6%	Cut/pierce	7,548	9%
4	Car occupant	49	7%	Assault	258	5%	Overexertion ⁷	5,485	7%
5	Drowning	39	5%	Motorcyclist	249	5%	Natural/ environmental ⁸	4,248	5%
6	Pedestrian	31	4%	Poisoning	221	5%	Assault	3,951	5%
7	Homicide	30	4%	Striking ⁶	161	3%	Car occupant	3,778	5%
8	Suffocation	27	4%	Pedestrian	115	2%	Fire/burn	1,096	1%
9	Motorcyclist	24	3%	Fire/burn	66	2%	Motorcyclist	1,037	1%
10	Injuries of undet. Intent	23	3%	Bicyclist	61	1%	Poisoning	1,005	1%
	<i>all other</i>	56	8%	<i>all other</i>	127	3%	<i>all other</i>	9,983	12%
	Annual total	741		Annual total	4,961		Annual total	82,392	

1 Non-residents comprised 10% of the victims killed by injuries in the state, 9% of those hospitalized, and 9% of those treated in emergency departments.

2 All injury causes are unintentional or “accidental” in intent, except for those labelled suicide, assault, and undetermined intent.

3 Average annual number of deaths, from 2013-2017 death certificates. For underlying cause of death in the ICD-10 code series: V01-Y36, Y85-Y87, Y89, and U01-U03.

4 Average annual number of injury-related hospitalizations, from 2013-9/2017 records. For principle diagnosis in ICD-9CM code series of 800-909.2, 909.4, 909.9, 910-994.9, 995.5-995.59, 995.80-995.85, and ICD-10CM series S through T78 (with some exceptions). Annual total includes 7% of records that did not have external cause of injury codes.

5 Average annual number of injury-related emergency department visits, from 2013-9/2017 records. For principle diagnosis in ICD-9CM code series of 800-909.2, 909.4, 909.9, 910-994.9, 995.5-995.59, 995.80-995.85, and ICD-10CM series S through T78 (with some exceptions). Annual total includes 8% of records that did not have external cause of injury codes.

6 Most of these patients were “struck accidentally by objects or persons”, or less commonly “struck accidentally by falling object”.

7 Most of these injuries were related to “Overexertion...from sudden strenuous movements”.

8 Nearly all of these visits were related to the bites or venom of animals, most specifically (in order): dog bites, centipedes, bee and wasp stings, and venomous marine animals.

Injury Prevention and Control Section



The Injury Prevention and Control Section (IPCS) is part of the Emergency Medical Services and Injury Prevention System Branch (ESMIPSB) at the Hawaii State Department of Health. IPCS is the focal point in the Department of Health for injury prevention throughout the state for all age groups.

IPCS is responsible for coordinating, planning, conducting, and evaluating injury prevention programs; developing policy and coordinating advocacy; collecting, analyzing and disseminating injury data; and providing technical support and training. Much of the work is achieved through community coalitions and partnerships in order to increase and focus community resources, minimize duplication of effort, and support the injury prevention activities of local agencies and community organizations. IPCS also provides staff support to IPAC.

Mission

- To provide statewide leadership in preventing death and disability associated with injuries in Hawaii by educating, supporting and mobilizing individuals and organizations to incorporate comprehensive injury prevention strategies in their daily activities.

Vision

- A safe Hawaii from the mountains to the sea.

Injury Prevention Advisory Committee



Mission: A safe Hawaii from the mountains to the sea.

The Injury Prevention Advisory Committee is a volunteer network of professionals and community members committed to working together to prevent injuries in Hawaii.

IPAC Members:

- Advise the Injury Prevention and Control Section
- Educate the public about injury prevention
- Advocate for injury prevention policies and legislation
- Serve as a liaison between IPAC and individual organizations
- Help identify and secure resources to support injury prevention

Focus Areas

Analyzing the burden of injury and violence in Hawaii is the first step used to determine focus areas for Hawaii. Having high, moderate or low capacity and infrastructure within the EMSIPSB for engagement are also factored into prioritizing injury prevention focus areas.

Core focus areas are identified with having high capacity and infrastructure for engagement by EMSIPSB. Core areas include five web-based components 1) the goal 2) problem statement, 3) long-term indicators, 4) SMART objectives, and 5) recommended strategies. **Special and emerging focus areas** are identified with having moderate to low capacity and infrastructure for engagement by EMSIPSB. While the EMSIPB is the lead for core areas, the Maternal and Child Health Branch (MCHB), Alcohol and Drug Abuse Division (ADAD), and Hawaii Concussion Awareness Management Program (HCAMP) are the lead agencies and community partners for special and emerging areas. For this reason, special and emerging focus area will only show a brief magnitude of the problem, and recommended strategies.

The Social Ecological Model is used as a guiding approach for EMSIPSB's work to prevent injuries in Hawaii. To frame our impact, strategies are aligned with risk and protective factors within each focus area, and across the individual, relationship, community, and societal levels of influence. This strategic plan establishes the foundation for Hawaii to later acknowledge and adopt the implementation of strategies utilizing a shared risk and protective factor framework.

<https://health.hawaii.gov/hipp/>

Core Focus Areas

- Drowning prevention
- Fall prevention
- Suicide prevention
- Traffic safety

Special and Emerging Focus Areas

- Poisoning prevention (substance abuse prevention)
- Violence and Abuse (Intimate partner/ sexual violence prevention)
- Child injury prevention
- Sports traumatic brain injury prevention

How the Hawaii Injury Prevention Plan Can Be Used

This Hawaii Injury Prevention Plan (HIPP) 2018-2023 reflects the current thinking of public health professionals and community partners. Developed in collaboration with injury prevention partners and EMSIPSB staff, the HIPP will be maintained as a “web-based strategic plan” that evolves with state of Hawaii. This web-based strategic plan, aligned with [Governor David Ige’s priorities](#) to convert to paperless systems, is beyond a static report, interactive, dynamic and will be regularly updated.

The HIPP can be used in a variety of ways by local agencies, businesses, community organizations, advocacy groups, planners, decision-makers, researchers, and others interested in preventing injuries. Examples include:

- **Collaboration:** Groups and individuals interested in addressing a particular injury area can use HIPP to assess the current thinking, get an understanding of the key players involved, and build consensus for implementing priority activities.
- **Policy making:** Advocacy groups working in injury prevention can use HIPP to support and act on prioritized areas of concern and identify key partners to collaborate with.
- **Program planning:** Organizations and individuals interested in addressing an injury area can use HIPP for priority setting and action planning.
- **Research:** Researchers, including graduate and medical students, can use HIPP to develop studies to adapt and evaluate evidence-based practices for Hawaii.

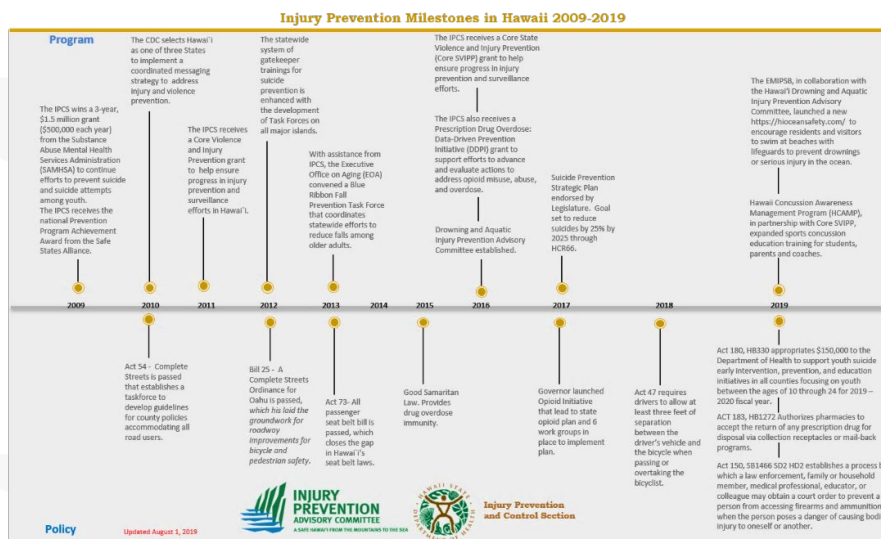
Core Capacity to Sustain Injury Prevention

Background

Since the release of the 2005-2010 and 2012-2017 Hawaii Injury Prevention Plans (HIPP), the Hawaii State Department of Health, Emergency Medical Services & Injury Prevention System Branch (EMSIPSB) has continued to work closely with partners in the community to build and strengthen the infrastructure to support injury prevention policy, research, surveillance and programs in Hawaii.

While EMSIPSB and IPAC have made tremendous strides, the priorities for injury prevention in Hawaii evolved. Based on the views and values captured from the Spring 2018 IPAC membership survey, accomplishments in injury prevention, and core capacity recommendations are refreshed in this section. The EMSIPSB and IPAC welcome all partners ready to engage in these critical public health recommendations to improve the lives of individuals and the overall health and well-being of our community. With the exception of Recommendation 3 which has been revised for improved clarity, the HIPP Core Capacity Recommendations remain constant and new priorities have been established for each of the six Core Capacities, extending the Plan through 2023.

Accomplishments



Program and policy accomplishments from every area of injury prevention is highlighted in the [timeline below](#). Notable successes include 1) the all passenger seat belt bill was passed by Act 73 in 2013, 2) the 2015 Good Samaritan Law

was passed to provide drug overdose immunity and set the stage for future drug overdose prevention efforts, 3) the 2017 Legislative endorsed the Suicide Prevention Strategic Plan to reduce suicides by 25% by 2025 through HCR66, and 4) first statewide Drowning and Aquatic Injury Prevention Advisory Committee established in 2017.

Core Capacity to Sustain Injury Prevention

Recommendation 1: Build and sustain infrastructure to provide leadership, data, technical assistance, and to support policy and evaluation for advancing injury prevention.

In the years since 2012 when the current HIPP was established, the role of injury prevention as a leading force for collaboration in support of public health initiatives has grown, particularly in response to emerging health issues such as trauma, technology impact on drowning prevention and impaired driving, opioid and substance abuse prevention, fall prevention as part of healthy aging, and the cross-cutting areas related to traumatic brain injury prevention.

This recommendation is central to the success of all the other Core Capacity Recommendations because its focus is on assuring sufficient infrastructure and resources exist to fulfill the mission of injury prevention. The expanding leadership role of injury prevention requires continued focus on sustaining and growing the infrastructure underpinning IPSC's ability to respond efficiently and effectively statewide to an increasingly engaged community.

Areas requiring particular attention include: maintaining and growing the data capacity to respond to the growing demand for data to support evidence-based decision making and well-informed policy initiatives; securing and coordinating the training and technical assistance in injury prevention among the IPAC membership and broader community; and continued leadership development and support to sustain and expand collaborative engagement among all concerned constituents.

Recommended Next Steps

Building on work completed for the *Hawaii Injury Prevention Plan 2005-2010*, IPCS and the IPAC steering committee developed the following recommendations. They are based on the core components of a state injury prevention program as identified by the Safe States Alliance (2003):

- Reorganize the Injury Prevention System Branch to better fulfill its mission in alignment with injury needs, including the addition of key positions where the needs are not adequately met.
- Engage in leadership development for IPAC and other injury prevention coalitions through collaboration and mentoring.
- Regularly update the cost/benefit analysis of the burden of injury.
- Secure sufficient staffing to meet the epidemiological and statistical needs of EMSPSB.

Core Capacity to Sustain Injury Prevention

Recommendation 2: Serve as a clearinghouse for data and incorporate other injury data sources to strengthen analyses and further injury prevention efforts.

Timely, high quality data is vital in targeting limited resources – monetary, policy, collaboration, staff, community engagement – for the greatest value and impact. EMSIPSB has developed a reputation for providing robust data and the demand is beginning to outstrip the capacity to respond. In addition, IPAC sees opportunities to expand the reach of this quality information through enhanced distribution through consumer-friendly communications.

Recommended Next Steps

- Maintain and expand EMSIPSB access to data.
- Promote the value and use of performance indicators to measure outcomes.
- Establish and maintain consumer-friendly communications on injury prevention.
- Establish and maintain online HIPP and a system for regularly updating data and other reports.

Recommendation 3: Provide training and technical assistance to increase injury prevention knowledge and skills among health care professionals and interprofessional education partners.

A robust training and technical assistance program that reflects the diverse areas of injury prevention must rely on the collaborative efforts of EMSIPSB, IPAC and other community organizations to identify, share and deliver quality services. EMSIPSB and IPAC will lead the identification, coordination, and promotion of injury prevention-related core competency-based training opportunities in collaboration with the Hawaii Public Health Institute and continue delivering technical assistance on an as needed basis.

Recommended Next Steps

- Assess the training and technical assistance needs in injury prevention among partners, practitioners and organizations working in related fields, and interested community members.
- Based on the results of the needs assessment, allocate resources towards relevant injury prevention and public health core competency-based training for existing and new workforce members.
- Offer Injury Prevention 101 training and refreshers at least annually that include the latest advancements in the field for health care practitioners.
- Develop injury prevention training through the University of Hawaii system that meets the Interprofessional Education (IPE) requirement of the University of Hawaii at Manoa Schools of Nursing, Medicine, Social Work, and Pharmacy, and the Office of Public Health Studies.

Core Capacity to Sustain Injury Prevention

Recommendation 4: Cultivate awareness among decision makers and the public to elevate injury and violence as a major public health problem in Hawaii.

While injury prevention has seen significant strides in policy and program initiatives in recent years, there is still a lack of public knowledge about injury and violence and the impact of preventing injuries on overall health and well-being. It remains imperative to effectively communicate the personal and financial costs of injury, as well as the potential solutions, in order to change behavior and ultimately prevent needless death and disability. EMSIPSB and IPAC are focused on developing accessible messages about injury prevention and evaluating the impact of increased awareness on safety practices.

Recommended Next Steps

- Develop, test and disseminate Hawaii-specific, consumer-friendly, targeted injury prevention messages covering all major injury areas.
- Inform partners about effective communication of injury prevention messages.
- Develop and disseminate data-informed policy papers for decision makers focused on legislative opportunities to advance injury prevention initiatives.

Recommendation 5: Inform injury prevention policy at all levels.

Establishing sound policy requires both good information and engaged champions who are prepared to show up and articulate the case effectively and passionately. EMSIPSB and IPAC are focused on ensuring the case for injury prevention is brought to the forefront by partners who are well-informed, supported in coordinating their efforts, and successful in building strong policies.

Recommended Next Steps

- Pursue a proactive legislative agenda in support of IPAC's annual priorities for action.
- Identify and support champions at the county, state and federal levels to advance injury prevention policy initiatives.
- Generate regular status updates on injury-related bills, e.g. through IPAC meetings and communications, and on the HIPP website.

Core Capacity to Sustain Injury Prevention

Recommendation 6: Increase opportunities for collaborative injury prevention efforts in all injury prevention areas.

Injury prevention is at its core a collaborative endeavor across diverse areas of public health, government, nonprofit sector, and interested community members. An ongoing priority for EMSIPSB and IPAC is reaching out to individuals and organizations to identify and cultivate new and emerging leaders, educating them on the leading areas of injury prevention, and inviting them to engage in collaborative efforts to affect change in the burden of injury and enhance the health and wellness of the people of Hawaii.

Recommended Next Steps

- Build a broader base of support for advancing and sustaining injury prevention efforts by identifying and engaging injury prevention partners who are currently missing from IPAC and related coalitions staffed by EMSIPSB.
- Convene multi-sector groups to increase collaborative efforts across injury areas.

Drowning Prevention

Goal

Decrease the incidence of fatal and non fatal drowning in Hawaii.

Magnitude of the Problem

Drownings are the 5th leading cause of fatal injuries among Hawaii residents, with an average of nearly 40 deaths a year. Drowning is the only injury cause for which non-residents comprise a majority of victims (53%), and their inclusion increases the average annual number of deaths to 83. Hawaii had the 2nd highest resident drowning fatality rate among all 50 States from 2013 to 2017, behind only Alaska. Within the state, residents of Hawaii County had the highest mortality rates, significantly higher than the rate for residents of Oahu. There was a slight increasing trend in the annual number of deaths; the change from ICD9-CM coding to ICD10-CM coding in October 2015 makes the assessment of trends in nonfatal drownings difficult. Most (84%) of the fatal drownings in Hawaii were in the ocean. Snorkeling was the most common activity, associated with 27% of all ocean drownings and 42% of those among non-residents. A review of EMS records of hospital patients indicated a very similar distribution of activity among victims of nonfatal ocean drownings. Children under 5 years of age comprised 30% (6) of the 20 victims of fatal swimming pool drownings, making this the leading cause of injury mortality among 1 to 4-years-old.

Drowning Prevention

Long – Term Indicators

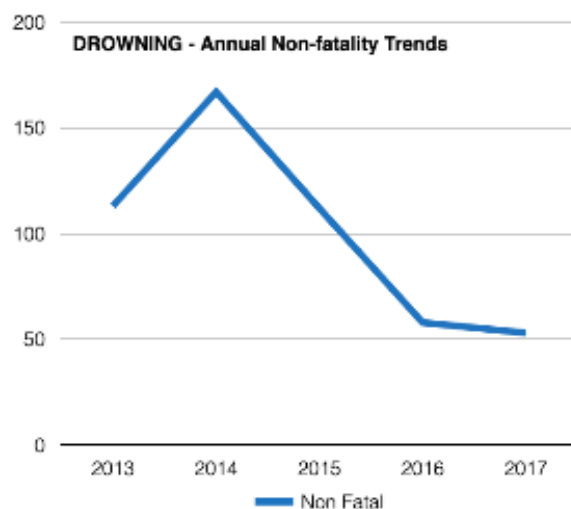
Mortality of Hawaii residents only: County & Total, 5-year number and rate (/100,000)

County	Number	Rate
Hawaii	38	18.72
Honolulu	124	11.78
Kauai	9	11.29
Maui	25	14.86
Total	196	13.02

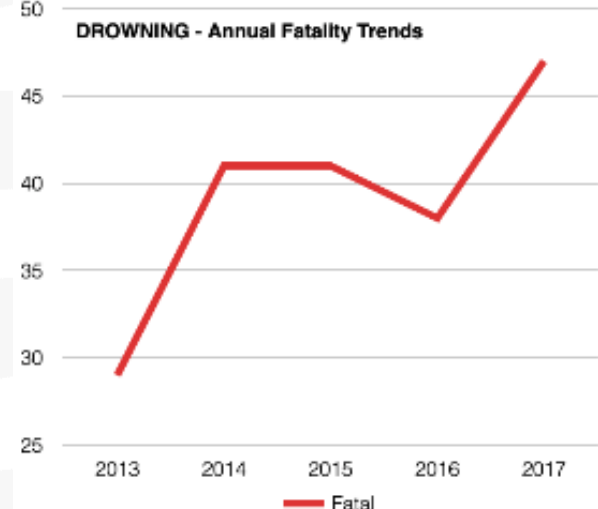
Morbidity of Hawaii residents only: County & Totals, 5-year number and rate (/100,000)

County	Number	Rate
Hawaii	60	32.35
Honolulu	395	43.24
Kauai	31	45.12
Maui	38	24.80
Total	523	40.02

Annual Nonfatal Trends



Annual Fatal Trends



SMART Objectives

- Decrease the 5-year drowning related mortality rate among Hawaii Residents from 13.02/100,000 in 2013-2017 to 11.72/100,000 by 2018-2022
- Decrease the 5-year drowning related morbidity rate among Hawaii Residents from 40.02/100,000 in 2013-2017 to 36.02/100,000 by 2018-2022

Drowning Prevention

Recommended Strategies

The EMSIPSB places a priority on having injury prevention strategies recommended by a community-driven action plan or informed by key implementing partners. Because a multitude of factors influence individual behavior, the strategies in the below table target risk and protective factors, framed across the individual, relationship, community, and policy levels.

Level	Strategy	Risk factors	Protective factors
Policy	Promote policies which support a foundation of drowning and aquatic injury prevention statewide	Lack of funds for first responder/ lifeguard services, support and equipment, absence of or poor aquatic health code, liability exposure to lifeguards, no state policy supporting child water safety.	Cohesive aquatic health codes Financial/ legal/community support of first responder/ lifeguard services
Community	Ensure representation from all organizations across the state that may influence the Advisory's mission of drowning and aquatic injury prevention. Support awareness regarding drowning as a major public health issue in Hawaii	Absence of lifeguards at pools, beaches, and other water environments, large visitor population. Promotion of snorkeling as a primary visitor activity, no state policy supporting child water safety.	Collaboration within counties and between counties and communities Access to swim lessons for adults and children Pervasive lifeguard water patrol Presence of public rescue tubes
Relationship	Establish a statewide culture that supports and promotes child water safety and water respect	Limited CPR ability of social network	Knowledge of and access to safety information
Individual	Develop, disseminate and sustain data driven drowning and spinal cord injury prevention messages applicable to risk and protective factors of target populations, and behavioral change prospect	No or poor swimming ability, Intrinsic medical condition, particularly circulatory, Going near or into the water alone, Positive blood level of alcohol or drugs	Experience in and around Hawaii ocean over time Ability to assess and respond to environmental conditions
Key Partner			
Drowning and Aquatic Injury Prevention Advisory https://hiceansafety.com/about-us/			

Fall Prevention Among Older Adults

Goal

Decrease the number of fatal and non-fatal falls statewide in Hawaii by implementing evidenced based programs.

Magnitude of the Problem

Unintentional falls were by far the leading cause of injury-related mortality among senior-aged (65 years and older) residents of Hawaii, accounting for nearly half (49%) of all such deaths. There was an average of 114 fatal falls among senior residents from 2013-2017, but there was a 48% increase over that 5-year period, from 88 to 130. Nonfatal injuries treated in hospitals also increased consistently, reaching a projected 10,000 in 2017. Falls were also the leading cause of nonfatal injuries among senior residents, accounting for 61% of those treated in emergency departments (ED) and 83% of those requiring hospitalization. Most (81%) of the deaths occurred among Oahu seniors, who also had the highest age-adjusted fatality rates, significantly higher than the rates for residents of Hawaii or Kauai counties. Senior residents of Kauai had the highest rates for nonfatal injuries treated in hospitals. Each ED visit resulted in an average of \$3,230 in hospital charges, and each hospitalization \$42,750, resulting in over \$100 million in combined hospital charges each year.

Fall Prevention Among Older Adults

Long – Term Indicators

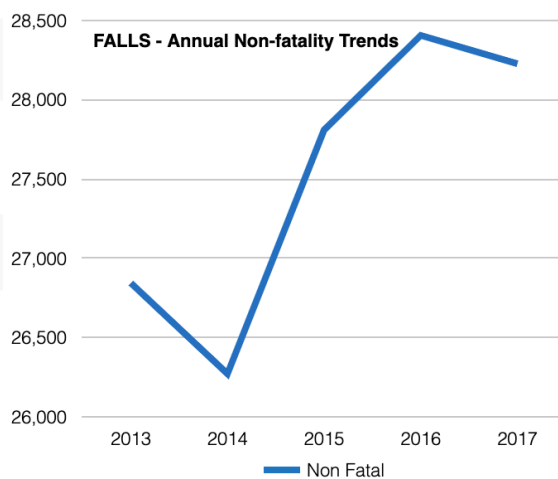
Mortality of Hawaii residents only: County & Total, 5-year number and rate (/100,000)

County	Number	Rate
Hawaii	36	105.20
Honolulu	464	249.00
Kauai	19	136.90
Maui	51	195.50
Total	570	219.00

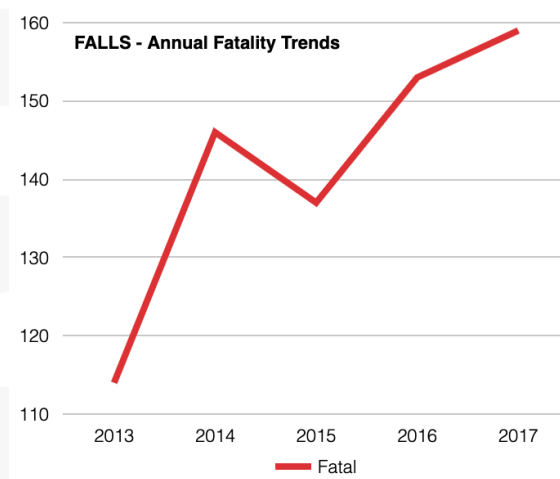
Morbidity of Hawaii residents only: County & Totals, 5-year number and rate (/100,000)

County	Number	Rate
Hawaii	22,722	11,121.96
Honolulu	92,654	8,779.58
Kauai	8,545	11,427.55
Maui	13,447	7,942.64
Total	137,368	9,119.40

Annual Nonfatal Trends



Annual Fatal Trends



SMART Objectives

- Decrease the 5-year Falls related mortality rate among Hawaii Residents from 36.45/100,000 in 2013-2017 to 32.80/100,000 by 2018-2023
- Decrease the 5-year Falls related morbidity rate among Hawaii Residents from 9119.40/100,000 in 2013-2017 to 8,207.46/100,000 by 2018-2023

Fall Prevention Among Older Adults

Recommended Strategies

The EMSIPSB places a priority on having injury prevention strategies recommended by a community-driven action plan or informed by key implementing partners. Because a multitude of factors influence individual behavior, the strategies in the below table target risk and protective factors, framed across the individual, relationship, community, and policy levels.

Level	Strategy	Risk factors	Protective factors
Societal	Institute fall screenings conducted by healthcare providers.	Limited laws encouraging fall prevention in the home and use of environment and services.	Laws and policy that require fall prevention be considered in the home, as programs and environmental design.
Community	Increase home modification services to community-dwellings. Institute effective fall prevention programs available to older adults and families. Increase free or affordable vision screening and vision improvement services. Increase free or affordable medication management services to older adults.	No established funding, capacity or infrastructure	Fostering partnerships, funding, contracts, agreements for building capacity community-based interventions, home modification services, screening, MOB classes, Tai Chi, etc.
Relationship		No Social Capital	Engagement of families; caregivers; fall prevention consortium members being aware and having access to and sharing fall prevention knowledge and programs.
Individual	Continue to increase fall prevention awareness among older adults, service providers, and family members.	No interest or awareness of intrinsic physical condition. Poor or lack of awareness of physical surroundings.	Self-efficacy; enhanced balance, mobility, vision, presence of home hazards, perceived risk, medication usage, awareness.
Key Partner			
Hawaii State Fall Prevention Consortium			

Suicide Prevention

Goal

To create a healthy, safe, and empowered community by reducing suicide attempts and deaths.

Magnitude of the Problem

Suicides were the leading cause of fatal injuries among Hawaii residents, accounting for 25% of the total. (Drug poisonings would be the leading mechanism, if intent was not considered.) The number of fatalities varied inconsistently over the 5-year period, although the 219 deaths in 2019 was the highest total to date. A commensurate decrease in the number of deaths coded as “undetermined intent” (i.e. generally, suicides) has also complicated the assessment of trends. Residents of Oahu had significantly lower mortality or morbidity rates than residents of any other county. Fatality rates among all Neighbor Islands were not significantly different. These findings are consistent with national reports of higher rates, or risk, of suicide among more rural populations. Fatality rates peaked among 20 to 29-year-old Hawaii residents, and progressively decreased over the age span. Males comprised 80% of the victims and had significantly higher rates than female residents of nearly every age group. Related autopsy records documented a history of mental illness for at least two-thirds (68%) of suicide victims, most commonly a “depressed mood” (54%); 24% had a diagnosis of depression. However, only 31% of decedents with a mental health problem were receiving treatment, and this proportion was much lower for residents of Neighbor Islands (8%), compared to those living on Oahu (40%). The most common “life stressors” were “problems” or “crisis” with their intimate partner (17%) or health (17%), with the former more prevalent among younger victims (29%) and the latter more prevalent (43%) among victims 65 years of age and older.

Suicide attempts, as inferred by self-inflicted injuries treated at hospitals, present a different epidemiology than deaths by suicide. The patients are majority (58%) female, 20% are under 18 years of age and 15 to 19-year-olds have the highest rates, and nearly two-thirds (63%) of the attempts are drug overdoses. By the most conservative method, there are an estimated 912 nonfatal attempts that require treatment in Hawaii hospitals each year; inclusion of injuries of undetermined intent or self-inflicted injuries with other principal diagnoses (e.g. mental illness) would more than double that estimate. The Hawaii Poison Center annually receives 865 calls that are related to intentional drug exposures.

Suicide Prevention

Long – Term Indicators

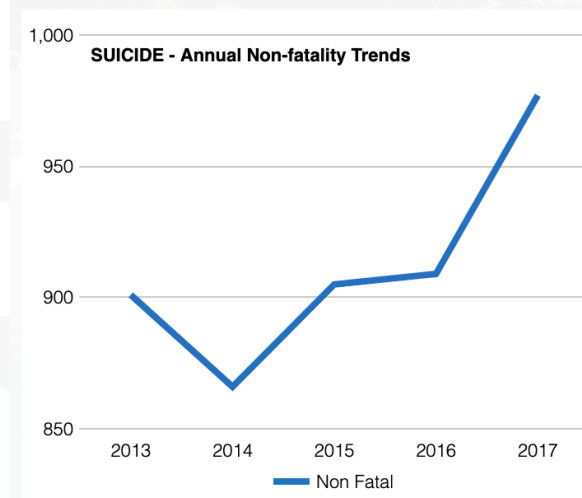
Mortality of Hawaii residents only: County & Total, 5-year number and rate (/100,000)

County	Number	Rate
Hawaii	187	97.19
Honolulu	541	52.04
Kauai	74	97.14
Maui	143	83.23
Total	945	63.51

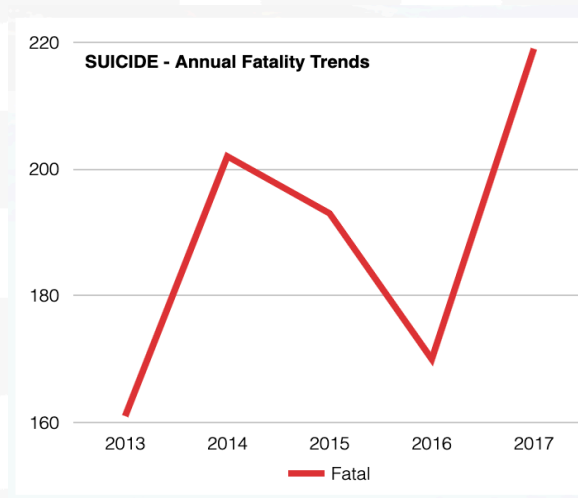
Morbidity of Hawaii residents only: County & Totals, 5-year number and rate (/100,000)

County	Number	Rate
Hawaii	965	566.35
Honolulu	2,758	293.88
Kauai	329	518.07
Maui	488	330.30
Total	4,541	344.05

Annual Nonfatal Trends



Annual Fatal Trends



SMART Objectives

- Decrease the 5-year Suicide related mortality rate among Hawaii Residents from 63.51/100,000 in 2013-2017 to 57.159/100,000 by 2018-2023
- Decrease the 5-year Suicide attempt morbidity rate among Hawaii Residents from 344.05/100,000 in 2013-2017 to 309.64/100,000 by 2018-2023

Suicide Prevention

Recommended Strategies

The EMSIPSB places a priority on having injury prevention strategies recommended by a community-driven action plan or informed by key implementing partners. Because a multitude of factors influence individual behavior, the strategies in the below table target risk and protective factors, framed across the individual, relationship, community, and policy levels.

Level	Strategy	Risk factors	Protective factors
Societal	Promoted suicide prevention as a core component of Hawaii's overall system of care Ensure policies and protocols set the proper foundation for suicide prevention initiatives	Unsafe media portrayals of suicide Stigma associated with mental health and help-seeking behaviors	Safe reporting and messaging about suicide. Supportive community environments for marginalized people
Community	Increase community awareness and communication around suicide prevention as a public health problem	Lack of access to providers, medication	Availability of medical and behavioral health services and other healthcare providers
Relationship	Increase statewide capacity for training across multiple levels and disciplines, including a focus on cultural humility with diverse populations	Violent relationships and financial/work stress	Connectedness with caregivers and social institutions
Individual	Increase State and community capacity to effectively and efficiently respond to those touched by suicide and those with mental health challenges	History of mental health issues, substance abuse and prior suicide attempts	Effective and available mental health care, substance abuse treatment services

Key Partner

- Statewide Prevent Suicide Hawaii Taskforce
- UH Department of Psychiatry – Deb Goebert - <https://jabsom.hawaii.edu/departments/psych/>
- American Foundation for Suicide Prevention, Hawaii Chapter <https://afsp.org/chapter/afsp-hawaii/>
- Mental Health America of Hawaii <http://mentalhealthhawaii.org/>
- Liliuokalani Trust <https://onipaa.org/>
- Adult Mental Health Division <http://health.hawaii.gov/amhd/>
- Child and Adolescent Mental Health Division <http://health.hawaii.gov/camhd/>
- US Military <http://www.garrison.hawaii.army.mil/asap/default.htm?tab=5>
- US VA <https://www.hawaii.va.gov/>
- Pacific Region Behavioral Health Alliance - Mary Burgess or David Brown www.pacificregionresources.org

Traffic Safety

Goal

To provide a transportation system where everyone arrives to their destinations free from injury.

Magnitude of the Problem

Traffic crashes are a significant source of injury-related mortality in Hawaii, accounting for over 100 deaths each year (about 14% of the total). About half (48%) of the decedents were occupants of cars or trucks, 22% were motorcyclists or moped riders, 28% pedestrians, and the remaining 2% were bicyclists. There were no consistent trends in the annual number of deaths for any of the modes over the 2013 to 2017 period. More detailed information was available for the 90% of decedents who were linked to FARS data from NHTSA. Impaired driving was a major factor, as 30% of the deaths were associated with alcohol-impaired driving, 29% with drug-impaired driving, and nearly half (47%) with either type of impairment. The latter proportion varied annually only between 41% and 53%, demonstrating the persistence of impaired driving. Lack of use of safety equipment was also prevalent, as nearly half (44%) of the car/truck occupants were not using seat belts at the time of the crash, and more than one-third (35%) of the motorcycle/moped riders were not wearing a helmet. (These proportions exclude 33% of decedents with no data on safety equipment.) There were strong associations between use of substances (alcohol or drugs) and non-use of safety equipment. Similar to suicides, residents of Oahu had significantly lower traffic-related mortality or morbidity rates than residents of any of the other 3, more rural, counties in Hawaii. Traffic crashes also cause nearly 6,000 nonfatal injuries which require treatment in Hawaii hospitals each year, including about 670 (11%) that result in hospital admissions. About two-thirds (64%) of these are injuries to car and truck occupants. However, more vulnerable road users (motorcycle and moped riders, pedestrians and bicyclists) constitute 54% of the admitted patients. There were decreasing trends in nonfatal injuries to motorcycle and moped riders and pedestrians, and an increasing trend in bicyclists injured in traffic crashes.

Traffic Safety

Long – Term Indicators

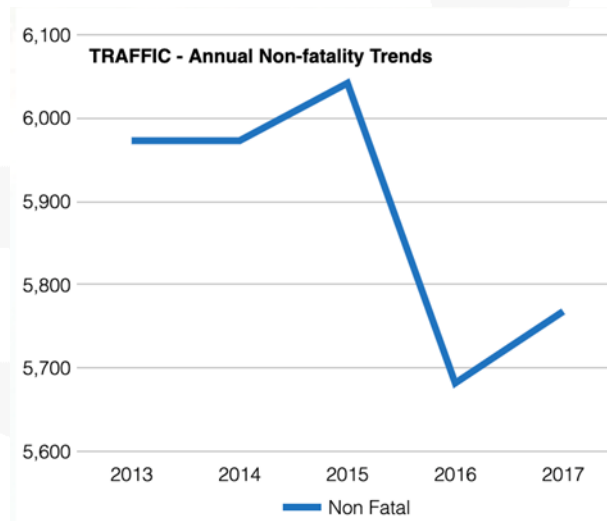
Mortality of Hawaii residents only: County & Total, 5-year number and rate (/100,000)

County	Number	Rate
Hawaii	120	64.97
Honolulu	269	25.69
Kauai	30	43.05
Maui	94	57.83
Total	513	34.93

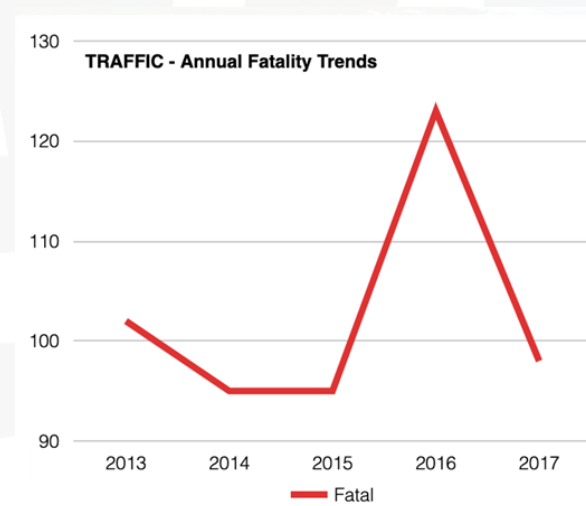
Morbidity of Hawaii residents only: County & Totals, 5-year number and rate (/100,000)

County	Number	Rate
Hawaii	6,077	3,310.82
Honolulu	18,299	1,832.57
Kauai	1,620	2,439.48
Maui	3,474	2,211.08
Total	29,469	2,087.74

Annual Nonfatal Trends



Annual Fatal Trends



SMART Objectives

- Decrease the 5-year motor vehicle mortality rate among Hawaii Residents from 34.93/100,000 in 2013-2017 to 31.437/100,000 by 2018-2023
- Decrease the 5-year motor vehicle related morbidity rate among Hawaii Residents from 2087.74/100,000 in 2013-2017 to 1,878.96/100,000 by 2018-2023

Recommended Strategies

The EMSIPSB places a priority on having injury prevention strategies recommended by a community-driven action plan or informed by key implementing partners. Because a multitude of factors influence individual behavior, the strategies in the below table target risk and protective factors, framed across the individual, relationship, community, and policy levels.

Traffic Safety

Level	Strategy	Risk factors	Protective factors
Societal	<p>Promote policies that support safe driving, walking and riding behaviors</p> <p>Promote policies that encourage use of protective devices (helmets and seat belts)</p> <p>Support implementation of safe and connected roadway infrastructure for all road users</p>	Objection to change in traffic safety laws	Policies and laws that encourage protective devices and safe driving behaviors
Community	Support community coalitions and partnerships to advance safe policies and protective street designs for all road users	<p>Cultural norm of unsafe driving or occupant behavior</p> <p>Substance misuse</p> <p>Lack of safe connected facilities for vulnerable road users (walking, biking, disabled)</p>	<p>Enforcement and encouragement of protective policies and roadway design</p> <p>Environmental changes to promote safe alternatives to substance mis use and impaired driving</p>
Relationship	Increase statewide capacity to use best available data to prioritize policy, enforcement and design.	Disconnected prevention efforts	Taskforces, coalitions and partnerships
Individual	Increase public and private partners to support traffic safety messages through their respective channels of influence	<p>Negative social media messages. Addiction.</p> <p>Driving without training, license or insurance</p>	<p>Culturally based social media messaging</p> <p>Peer to peer influence</p> <p>Positive change challenges</p>
Key Partners			
<ul style="list-style-type: none"> • Hawaii Strategic Highway Safety Plan • Hawaii State Highway Safety Council • Oahu Metropolitan Planning Organization • Hawaii Mothers Against Drunk Driving • Hawaii Trauma Advisory Council • Hawaii Department of Transportation • Kauai Path • Peoples Advocacy for Trails Hawaii • Hawaii Bicycling League <p>Hawaii Traffic Commanders</p>			

Poison Prevention

Magnitude of the Problem

If intent is not considered (i.e. suicides), drug poisonings is the leading mechanism of fatal injuries among Hawaii residents, surpassing deaths falls and motor vehicle crashes as of 2007. There was an average of 171 fatal drug poisonings among residents each year, with consistent increases from 148 in 2013 to 200 in 2017. At least 36% of these deaths were related to opioid overdoses, mostly prescription pain relievers. Poisonings involving methamphetamine are also thought to be common, although these are difficult to detect through death certificate coding. Relative to the U.S. as a whole, however, drug poisoning fatality rates are significantly lower for Hawaii residents, and not increasing at the same alarming rate. These generalizations are specifically true in the context of opioid overdoses, where Hawaii has yet to experience the dramatic spike in deaths involving heroin and synthetic opioids such as fentanyl. Linkage of autopsy data from Honolulu County and the Prescription Monitoring Program indicate that most (73%) of the opioid overdose victims had legally prescribed access to opioids, including about half (49%) with prescribed supply within 3 months of their death. For every fatal opioid overdose, there are nearly others nonfatal overdoses treated in Hawaii hospitals, and nearly 4 calls to the Hawaii Poison Hotline.

Recommended Strategies

The EMSIPSB places a priority on having injury prevention strategies recommended by a community-driven action plan or informed by key implementing partners. Because a multitude of factors influence individual behavior, the strategies in the below table are framed across the individual, relationship, community, and policy levels.

Poison Prevention

Level	Strategy
Societal	Hawaii Poison Hotline *Focus Area #7: Integrate SUD screening in primary care settings and develop referral and entry system into a continuum of care.
Community	*Focus Area #6: Coordinate operations and services, support specialized training for first responders and assure effective laws and policies. *Focus Area #4: Improve community-based programs and public education to prevent substance misuse and related harms.
Relationship	*Focus Area #2: Improve opioid and related prescribing practices by working with healthcare providers.
Individual	*Focus Area #5: Increase consumer education and prescription harm management through pharmacy-based strategies.
Key Partner	
<u>Hawaii Opioid Initiative - Alcohol and Drug Abuse Division (ADAD) *</u>	

Sport Traumatic Brain Injury Prevention

Magnitude of the Problem

There are 12650 traumatic brain injuries (TBI) that require hospital treatment among Hawaii residents each year, with a generally increasing trend. However, this total includes nearly 8,300 TBI defined by diagnoses of “unspecified head injury”. If case definition is limited to more specific coding (e.g. concussion, intracranial hemorrhage, etc.) there are 4360 TBI each year, with a decreasing trend over the 2013 to 2017 period. About one-third (32%) of these more specifically-coded TBI result in hospital admission, compared to only 3% of patients with “unspecified head injury”. Residents 75 years and older have the highest rates of any type of TBI, followed by those under the age of 5, and 15 to 18 year-olds. Hospital disposition generally worsened across the age range, reaching 4% mortality among patients 75 years and older. About three-fourths (73%) of the patients are residents of Oahu; standardized rate estimates are significantly higher for Oahu residents than for any other county. Unintentional falls caused over half (57%) of all TBI, including 41% among senior-aged (65 years and older) residents. Other common causes were car/truck crashes, assaults, and motorcycle/moped crashes. Data from the Hawaii Trauma Registry describes significant associations between non-use of seat belts and helmets and incidence of TBI among patients injured in motor vehicle crashes. It is difficult to say how many of these TBI were sustained while engaged in sports, as only 28% of the hospital records contained codes on patient activities. Among this subset of records, 21% had activity codes to indicate sports, most commonly tackle football (6%), basketball (3%) and soccer (3%). Most (62%) of the TBI among 10 to 17-year-old patients with requisite activity codes were sports-related.

Sport Traumatic Brain Injury Prevention

Recommended Strategies

The EMSIPSB places a priority on having injury prevention strategies recommended by a community-driven action plan or informed by key implementing partners. Because a multitude of factors influence individual behavior, the strategies in the below table are framed across the individual, relationship, community, and policy levels.

Level	Strategy
Societal	
Community	Increase availability of concussion education videos for high school coaches, parents and athletes. Content of video is based on needs assessment data, qualitative interviews, and peer reviewed literature, and CDC HeadsUp. Collaboration between Hawaii Concussion Awareness and Management Program (HCAMP) and the Core State Violence and Injury Prevention Program (Core SVIPP) .
Relationship	
Individual	<p>Increase availability on online educational resource that will educate school aged children and youth in the State of Hawaii on head, neck, and spinal cord related health and safety protocols. The educational resource will be a fun, engaging, and self-directed learning experience for youth that will test their knowledge and incorporate family members in the learning process.</p> <p>HCAMP Concussion Summit: DOH Neurotrauma sponsors the annual HCAMP Concussion Summit, which aims to provide concussion education and awareness for athletic trainers, parents, coaches, school administrators, and health care providers, including physicians, physical therapists, and speech pathologists.</p>
Key Partners	
Hawaii Concussion Awareness and Management Program (HCAMP)	
Hawaii State Department of Health – Neurotrauma Supports	

Child Injury Prevention

Magnitude of the Problem

Injuries were the 2nd leading cause of death among child (ages infant to 17 years) residents of Hawaii, accounting for about 17% of the total. More children died from injuries from 2014 through 2018 than from congenital anomalies, cancer, or other chronic diseases. If infants are excluded, injuries were by far the leading cause of death among 1 to 17-year-old residents, accounting for nearly (43%) as many deaths as all other causes combined. Most (66%) of the fatal injuries among Hawaii children were unintentional, 21% due to suicide and 11% from homicide. Fatal injury causes differ across the child age range, with suffocation (also including SIDS), homicide, and drowning more prevalent among children under 5, and suicide and motor vehicle crashes predominating among teenagers. An average of 24 children die from injuries each year in Hawaii, but fatalities represent only a small proportion. Each year, 373 resident children are hospitalized from injuries, and another 23,500 are treated in the emergency department. Nearly 2,800 injured children are transported by EMS ambulance to hospitals. If fatal injuries are considered together with those that require a hospitalization of 7 days or longer (46 each year), the age-related causes are largely the same: issues of safe sleep and assault for young children, and suicide and motor vehicle crashes for older children. Despite their prominence as a cause of mortality and morbidity, fatal injury rates for Hawaii's children (8.6 deaths /100,000) are significantly lower than those for the United States as a whole (12.2/100,000). Hawaii had the 8th lowest child injury fatality rate among the 50 States over the 2014 through 2017 period. Hawaii rates for fatal unintentional injuries, and violence-related (homicides and suicides) were also significantly lower, by 28% and 31%, respectively, compared to the nation.

Recommended Strategies

The EMSIPSB places a priority on having injury prevention strategies recommended by a community-driven action plan or informed by key implementing partners. Because a multitude of factors influence individual behavior, the strategies in the below table are framed across the individual, relationship, community, and policy levels.

Child Injury Prevention

Level	Strategy
Societal	<p>Safe Sleep Hawaii provides statewide leadership in preventing infant deaths through educating parents, caregivers, teachers and health care providers on the Safe Sleep.</p> <p>Institute statewide training for Hawaii Home Visitors/ Your Ohana to prevent child injury among enrolled families.</p>
Community	<p>Strategy: Creating Safe and Protective Environments</p> <p>Safe and Nurturing Family Framework – ECAS is a statewide public-private collaborative designed to improve the system of care for Hawaii’s youngest children and their families. Includes messaging, training, and resources for families and early childcare providers.</p>
Relationship	<p>Strategy: Community Cafés</p> <p>Implement the Community Café practice model. The model supports meaningful conversation to promote leadership skills and relationships based on the protective factors to address preventing child maltreatment in their community.</p>
Individual	<p>Strategy: Community Awareness</p> <p>Child Abuse Prevention Month activities; supporting year-round community-based family-child engagement activities designed around protective factors; showing the documentary “Resilience” with facilitated discussion; Safe Sleep Summit.</p>
Key Partners	
<p>Maternal and Child Health Branch</p> <p>Early Childhood Action Strategy (ECAS)</p> <p>Hawaii Public Housing Authority and Resident Advisory Boards</p> <p>Hawaii Children’s Trust Fund</p> <p>Hawaii Home Visiting Service Unit – Your ‘Ohana</p>	

Violence and Abuse (Intimate Partner/ Sexual)

Magnitude of the Problem

Intimate partner violence is well known to be under-reported (under-coded) in administrative medical records. The reliability of describing this issue through sources such as hospital billing data is therefore in question. Analysis of such data from 2015 through 2017 indicated an average of 125 hospital presentations of injuries from IPV against women each year. (This number could be increased to approximately 200 if records with no information on perpetrator are also included.) Most (92%) of these injuries were treated at the emergency department level. The proportion of patients residing in Oahu (54%) was lower than expected, given 69% of female residents 12 years and older reside there. Conversely, 28% of the patients were from Hawaii County, which accounts for only 14% of the female population.

To examine this issue in the pre-hospital setting, a random sample of 855 (18%) of the 4,777 Emergency Medical Services records for females (ages 12 to 50 years) who were injured by assaults from 2013 through 2015. Based on open text narrative from the EMS provider, IPV was identified as the “definite” cause of 38% of the injuries, and the “probable” or “possible” cause of 21%. These proportions result in annual estimates of 609 definite EMS encounters of IPV each year, and an additional 340 probable/possible incidents. Nearly two-thirds (65%) of the EMS patients refused transport to a hospital for further medical attention. Even so, the estimated average of 330 EMS transports of female victims of IPV exceeds that indicated from hospital billing data (125), confirming the under-coding of IPV in hospital records. Based on a study of Hawaii EMS records linked to hospital records, only 39% of female IPV hospital patients arrive by EMS. Combined with the 330 who are transported by EMS, the annual estimate of hospital presentations of IPV is 800 to 900.

The average age of the IPV victims was 31 years, and 75% were 20 to 40 years of age. Victim age distribution was similar across counties. Overall 66% of the patients refused hospital transport. This proportion was significantly lower for those treated in Hawaii County (23%) compared to other counties (71%). There was no association between victim age and transport status.

Violence and Abuse (Intimate Partner/ Sexual)

Recommended Strategies

The EMSIPSB places a priority on having injury prevention strategies recommended by a community-driven action plan or informed by key implementing partners. Because a multitude of factors influence individual behavior, the strategies in the below table are framed across the individual, relationship, community, and policy levels.

Level	Strategy
Societal	<p>Institute statewide standard for DV screening at medical and dental sites.</p> <p>Institute statewide training for Hawaii Home Visitors/ Your Ohana to enhance skills and confidence when screening families for IPV.</p>
Community	<p>Create Multidisciplinary Teams for DV</p> <p>Strategy: Social Norms Change/Engaging Men as Allies Na Leo Kane, Social Media and Website Project– Na Leo Kane is a statewide public-private collaborative of agencies, organizations and individuals engaging men as allies to prevent domestic and sexual violence.</p> <p>Strategy: Creating Safe, Protective Environments ECAS is a statewide public-private collaborative designed to improve the system of care for Hawaii’s youngest children and their families. Includes messaging, training and resources for early childhood providers and families. Middle and High School Campus Mapping Project, Kapiolani Medical Center, Sex Abuse Treatment Center</p> <p>Middle and High School Campus Mapping Project, Kapiolani Medical Center, Sex Abuse Treatment Center</p>
Relationship	<p>Strategy: Community Mobilization Sexual Violence Prevention (SVP) Community Action Teams (CAT), DOH MCHB Statewide – CATs include Alcohol Junction, Hawaii Partnership to Prevent Underage Drinking, Military, Engaging Men and Boys, Leeward Waianae, University/Higher Education, LGBTQ, Maui, Kauai, Kau, East Hawaii, and Molokai. SVP CATs attend annual SVP trainings and develop action plans to implement primary prevention strategies in their communities and/or communities of practice. CATs also participate in planned activities for Sexual Assault Awareness Month (SAAM) in April intended to raise awareness of the prevalence of sexual violence and opportunity to engage new community members to participate in SVP efforts throughout the year.</p>
Individual	<p>Strategy: Coaching Boys into Men</p> <p>Strategy: Bringing in the Bystander</p> <p>Strategy: Middle and High School Sexual Violence Prevention</p>
Key Partners	
<p>Maternal and Child Health Branch Sexual Violence Prevention (SVP) Community Action Teams</p> <p>Hawaii Early Childhood Action Strategy (ECAS)</p> <p>Hawaii Family Law Clinic dba Ala Kuola</p>	

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Hawaii Home Visiting Service Unit – Your ‘Ohana

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