



HAWAII

Special Emphasis Report: Infant and Early Childhood Injury, 2010-2014

Injury is a Leading Cause of Death in Children

Injuries are a major public health problem across the United States and in Hawaii. However, injuries are not random chance events, or “accidents”. Most injuries follow a very predictable sequence of events and can be prevented using specific strategies.

An average of 12 child (infants through 5 years of age) residents of Hawaii died each year as a result of an injury. For every child that died from an injury, another 14 children were hospitalized (165 per year), and another 812 (9,747 per year) were treated and released from an emergency department (ED). These numbers do not include children who were treated in a physician’s offices or at home.

There were no clear trends in the annual number of hospitalizations or injuries treated in EDs. The number of fatal injuries varied inconsistently from 9 to 15 each year.

Data sources: Mortality data is from the death certificate database of the Hawaii Department of Health. Data on ED visits and hospitalizations is from the Hawaii Health Information Corporation (HHIC). Only HHIC records with an injury-related principal diagnosis were included. Records of patients who died in the hospital or who were transferred to another hospital were excluded.

Figure 1: Annual Injuries among Children Ages 0-5 Years, Hawaii, 2010-2014

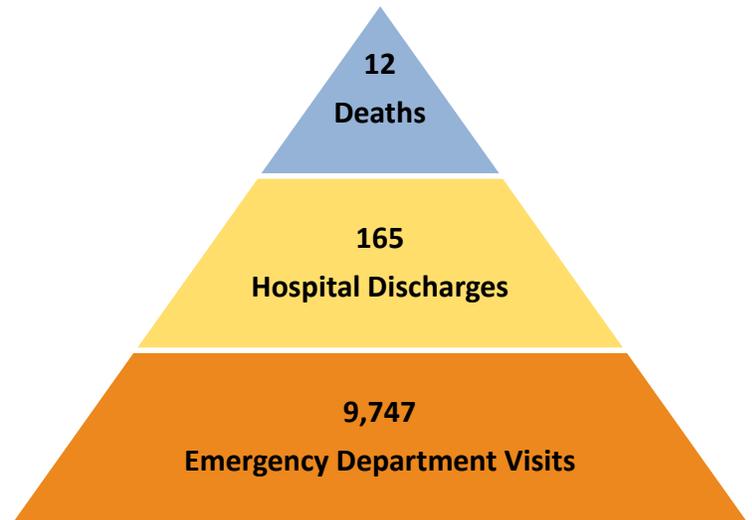
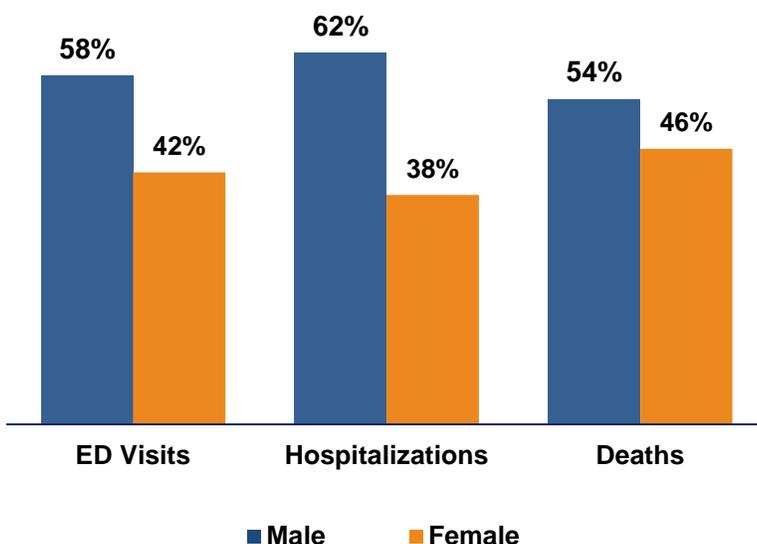


Figure 2: Percent of Injury Deaths, Hospitalizations and Emergency Department Visits among Children Ages 0-5 Years, by Sex, Hawaii, 2010-2014



Childhood Injury by Sex

Boys suffered more fatal and nonfatal injuries than girls, comprising about 6 out of every 10 injured children. For nonfatal injuries treated in EDs, the proportion of boys increased across the age range, as they comprised 55% of infant patients, but 61% of those who were 5 years old. Gender was more evenly distributed across nonfatal injuries from assaults, drownings, car and truck crashes and suffocations, as girls comprised nearly half (48%) of these patients



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Injury Deaths in Infants

Unintentional suffocation while in bed was by far the leading cause of injury-related death among infants in Hawaii, accounting for 54% (13) of 24 total deaths. All 13 of these victims were less than 5 months of age. The number of suffocations would be more than doubled if the 23 deaths from SIDS were also included.

Homicides (3 deaths) and possible homicides (4 deaths) were the next most common causes.

Figure 3: Injury Deaths among Infants Less than 1 Year, Hawaii, 2010-2014

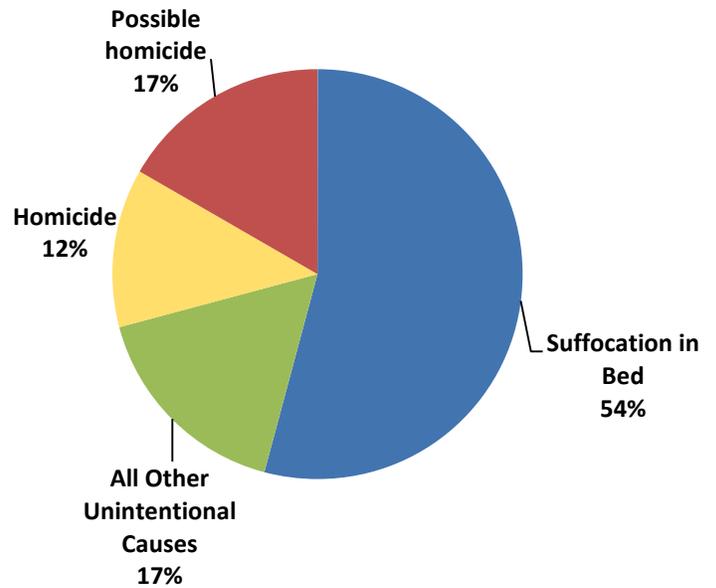
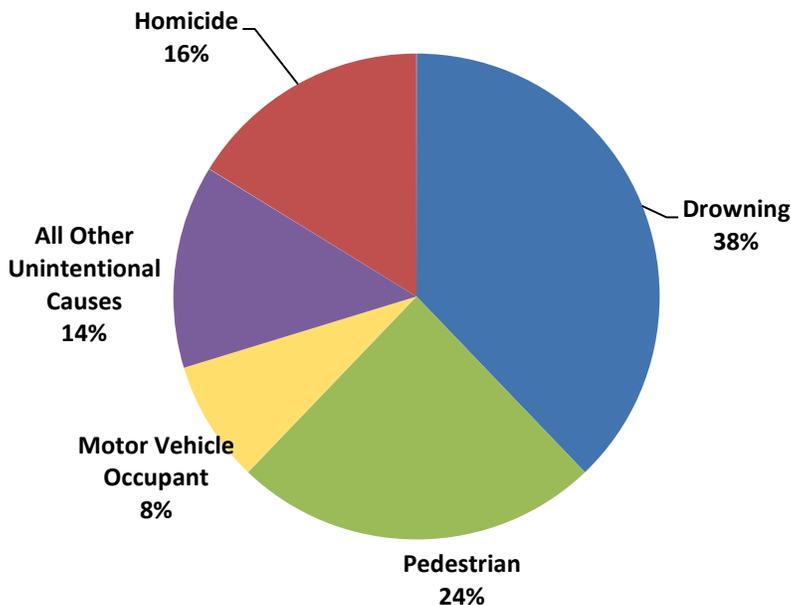


Figure 4: Injury Deaths in Children Ages 1 – 5 Years, Hawaii, 2010-2014



Injury Deaths in Young Children

About four out of 5 injury-related deaths (84%) among 1 through 5 year-old Hawaii residents were unintentional, while 16% resulted from homicides.

Drownings (38% of the total) and pedestrian crashes (24%) accounted for more than half of the 37 fatal injuries this age group. Six of the drownings were in swimming pools, and 4 in the ocean. The peak age was 3 years (7 victims), and 9 of the 14 victims (64%) were males.

Most (7, or 78%) of the 9 fatally injured pedestrians were killed in non-traffic crashes, i.e. not on public roadways.

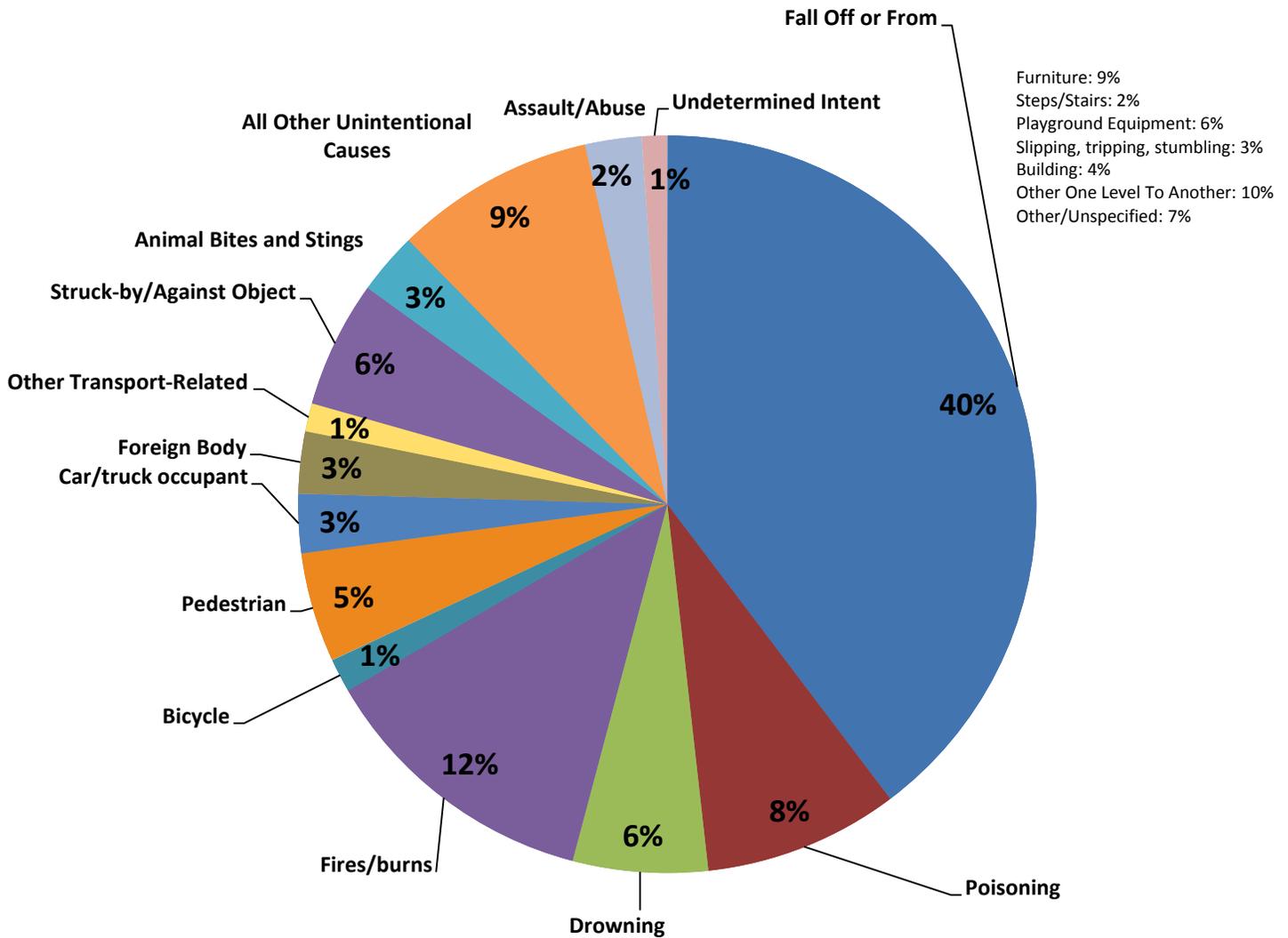


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Injury-Related Hospitalizations

Figure 5: Injury-Related Hospital Discharges among Children Ages 0 – 5 Years, Hawaii, 2010-2014



Falls were by far the most common cause of injury-related hospitalizations among children, accounting for more than one-third (40%) of the total, both among infants (45%) and residents 1 to 5 years of age (39%). Falls from furniture and playground equipment were the most frequently coded types of falls. Injuries from fires and hot objects (12%), poisonings (8%), and motor vehicle crashes (8%), were also leading causes of the hospitalizations. Almost all (92%) of the burn injuries were from contact with “hot substances or objects” (not open flames), including 11 hospitalizations each year from “hot liquids and vapors”. Over half (53%) of the burn patients were 1 year-olds. Most (75%) of the injuries from bicycle crashes did not involve a motor vehicle. Injuries from assaults were more common among infants (9% of their total) compared to older children (1%), although there were only 3 such hospitalizations each year among infants. Most (84%) of the unintentional poisonings were from drugs and medicinal substances, most commonly cardiovascular agents (17%), and “hormones and synthetic substances” (17%).

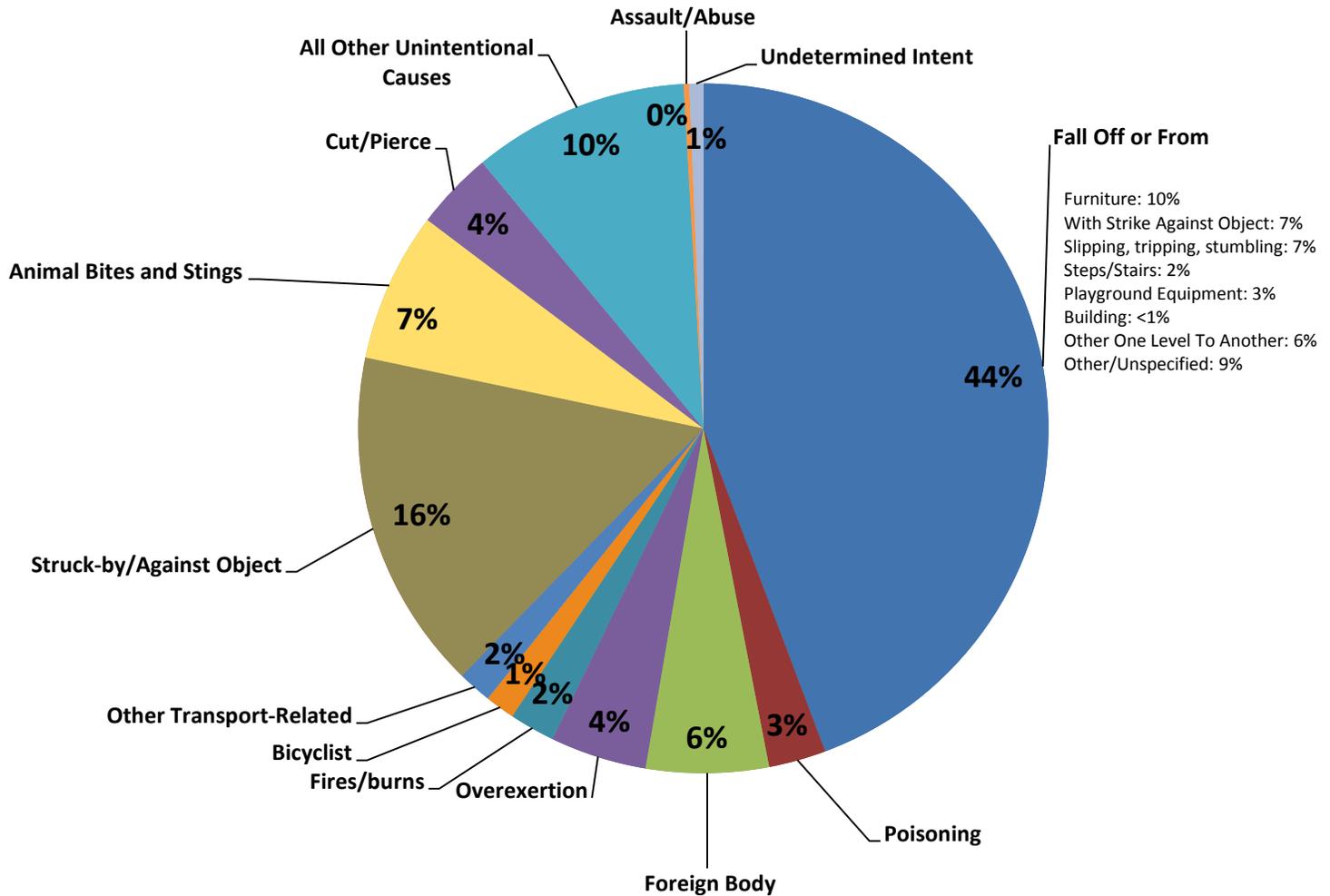


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Injury-Related Emergency Department Visits

Figure 6: Injury-Related Emergency Department Visits among Children Ages 0 – 5 Years, Hawaii, 2010-2014



Similar to hospitalizations, unintentional falls were the leading cause of injury-related ED visits among children, accounting for nearly half (44%) of the total, and 58% of the ED visits among infants. Almost all (99%) of the injuries were coded as unintentional; there were very few coded as assaults (24 per year) or possible assaults (60). The next most common cause was “striking against or struck by objects or persons”, with little further detail. Among the “animal bites and stings” causes, bites from “nonvenomous arthropods” (insects) were most common (365 per year), followed by dog bites (144), wasps and bees (46), and centipedes (23). Only 1% (135 injuries per year) of the injuries were caused by motor vehicle crashes. More children were more often hurt in bicycle crashes that did not involve a motor vehicle (128 injuries per year), than in crashes that involved a motor vehicle (2 per year).



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Table 1: Annual Average Number of Injury-Related Hospital Discharges and Emergency Department (ED) Visits among Children Ages 0 -5 Years, by Age Group, Hawaii, 2010-2014

	Infants less than 1 Year		Children Ages 1-5 Years	
	Hospital Discharges	ED Visits	Hospital Discharges	ED Visits
Unintentional Injuries				
Cut/pierce	<1	21	<1	319
Drowning/submersion	<1	1	9	15
Falls (<i>off/from</i>):	14	547	51	3,564
Furniture	7	299	7	650
Steps/stairs	<1	12	3	138
With strike against object	<1	45	1	641
Slipping/tripping/stumbling	<1	21	5	627
Playground equipment	<1	2	8	239
Building	<1	1	8	33
Other fall from one level to another	5	94	12	451
Other/unspecified	1	74	7	784
Fire/Burn	2	25	18	172
Foreign Body	1	39	4	494
Natural and Environmental	1	63	4	590
Excessive heat	<1	<1	<1	<1
Dog bites	<1	3	3	141
Other bites/stings/animal injury	<1	59	1	447
All other natural/environmental	<1	<1	<1	2
Overexertion	<1	15	1	403
Poisoning	1	26	12	223
Struck-by/against object	1	96	8	1,389
Transport-related	1	11	15	267
Motor vehicle (MV)-occupant	1	9	3	72
Bicycle/tricycle (MV & non-MV)	<1	<1	2	129
Pedestrian (traffic and non-traffic)	<1	<1	8	23
Other transport	<1	2	2	42
All other unintentional causes	6	88	7	833
Assault/Abuse	3	3	1	21
Undetermined/Other Intent	1	4	1	57
Unknown	<1	39	3	420
Total Injury-Related Cases	32	979	134	8,768



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Hawaii Child Injury Prevention Activities

The newly established Safe Kids Hawai'i partners with the Keiki Injury Prevention Coalition to lead statewide efforts in childhood injury prevention with support from Kapi'olani Medical Center for Women & Children. Safe Kids focused on car seat/vehicle and pedestrian safety as priorities since these continue to be high risk injury areas for children. The Hawaii Department of Health, Emergency Medical Services & Injury Prevention System Branch continues to work with KIPC and Safe Kids to increase resources and awareness for preventing injuries to children, including preventing window falls.

National initiatives such as the Collaborative Improvement & Innovation Network (COIIN) to Reduce Infant Mortality support Hawaii's child injury priorities of safe sleep and child abuse and neglect prevention. COIIN is working with the Safe Sleep Committee to strengthen implementation of child care policy and hospital policy, and training and development of standardized messages to increase public awareness. The CBCAB (Community-Based Child Abuse Programs) funded "Community Voices for Our Keiki" project that spans several years of community research on child maltreatment prevention, including community surveys and key informant meetings with community leaders in selected communities across the state. Qualitative data along with other sources will guide the development of the child abuse and neglect prevention plan for Hawaii.



Hawaii Home Visiting Program

Hawaii Department of Health's Maternal, Infant, Early Childhood Home Visiting (MIECHV) Program continues to support five centralized intake and eleven home visiting programs on six islands, utilizing three evidence-based home visiting models to improve the outcomes of children (prenatally through five years of age) and their families. Evidence supports that the educational efforts of home visiting programs, including use of the Keiki Checklist, are successful in meeting key program performance measures to reduce in child injuries among program participants. Visits to emergency departments for children of program participants were reduced from 29% in 2012 to 15% in 2014. Reduction in reported substantiated maltreatment among participants also decreased from 1.6% in 2012 to 1.1% in 2014. MIECHV also partners with CBCAB program to reduce the incidence of child abuse and neglect.

Notes: Data sources

All injuries are considered unintentional unless specified otherwise. Reference to any commercial entity or product or service on this page should not be construed as an endorsement by the Government of the company or its products or services.

The Hawaii Department of Health, Emergency Medical Services & Injury Prevention System Branch

<http://health.hawaii.gov/injuryprevention/>