

Mortality among non-residents of Hawaii, 2019-2023

Methods:

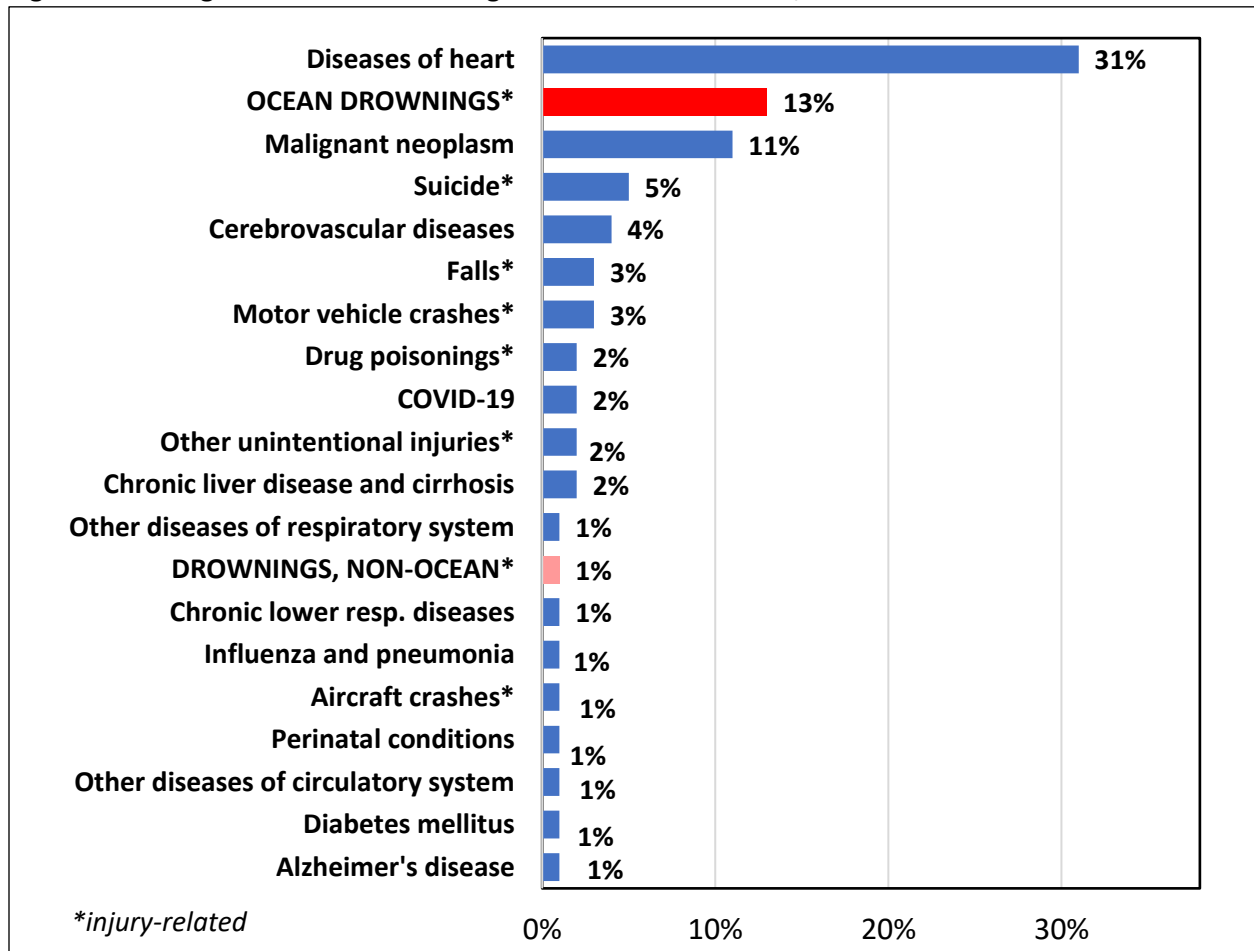
Data source is the death certificate database of the Hawaii State Department of Health, limited to the 2.3% (1,464) of the 62,771 decedents who were not residents of Hawaii. Causes of death were categorized using the ICD10 code for underlying cause of death. Analyses specific to drownings further expanded this definition to include deaths with drowning as a contributing cause of death. This resulted in the addition of 6 deaths (3% of the total) to the 196 deaths with drowning as the underlying cause.

Results:

Ocean drownings were the 2nd leading cause of all types of mortality among non-residents over the 5-year period, behind only heart disease (Figure 1). The 197 ocean drownings outnumbered deaths from chronic conditions such as cancer and cerebrovascular disease. Excluding data from 2020, an average of 45 non-residents drowned in the ocean each year, with the annual total varying from 34 to 57. Another 19 non-residents drowned in environments other than the ocean, primarily swimming pools, making this the 13th leading cause of death.

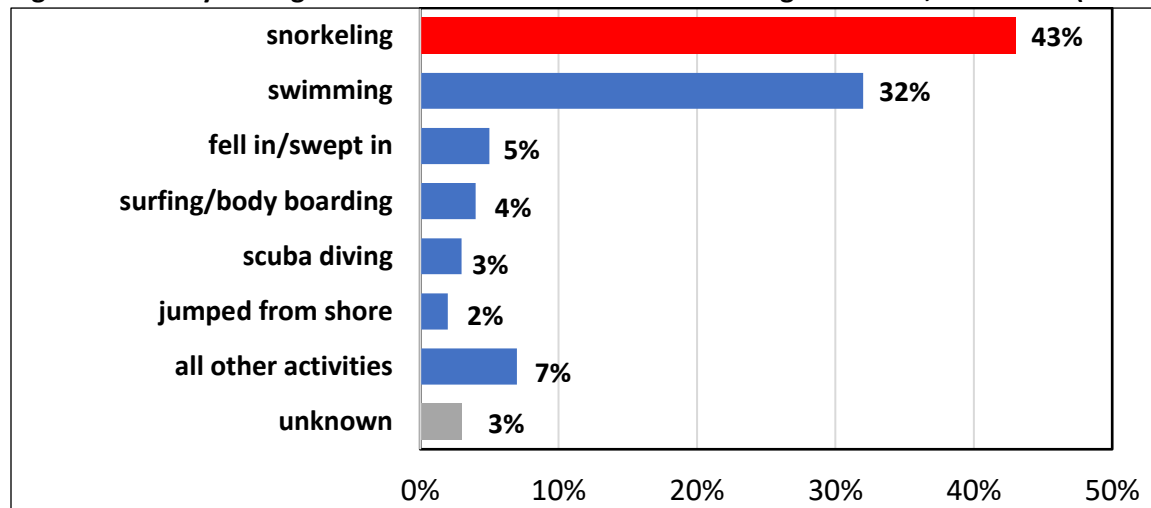
Ocean drownings were the leading cause of death among residents less than 55 years of age, accounting for 19% (83) of the 428 deaths in this age group.

Figure 1. Leading causes of death among non-residents in Hawaii, 2019-2023



Snorkeling was the most common activity among the 202 non-residents with ocean drowning as either the underlying (196) or contributing cause of death (6) (Figure 2). Nearly half (44%, or 38) of the 87 snorkelers drowned off Maui. Most (86%, or 75) of these victims were residents of other States and 12 were from foreign countries. California was by far the most common State of residency, accounting for 30 of the snorkeling victims. (No other State had more than 7 victims among the total.) Victims who drowned while snorkeling were significantly older than other non-resident victims (58 years on average, vs. 52 years). The proportion of male victims did not differ significantly between the two groups (76% vs. 82%, respectively). August was the most common month for drownings among snorkelers, accounting for 20% (17) of their total, compared to 7% by chance alone.

Figure 2. Activity among non-resident victims of ocean drownings in Hawaii, 2019-2023 (n=202)



Taking a longer view, the average annual number of non-resident drownings among snorkelers increased more than 8-fold from 1995 to 2019, the peak of visitor arrivals (Figure 3).

Figure 3. Average annual number of fatal ocean drownings among non-residents in Hawaii, by activity and time period, 1995-2023 (Data for 2020 omitted due to COVID19-related travel restrictions)

