

2020 CARES Drowning Module: Highlight on Hawaii

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In January 2020, CARES announced the addition of a drowning module to supplement the core CARES dataset that includes 7 questions to better understand drowning related cardiac arrest events. There is nowhere in the United States that this data is more critical than in the state of Hawaii. The state's coastline expands over 750 miles, attracting over 10 million tourists annually in addition to its 1.4 million residents. Drowning is the leading cause of deaths for tourists visiting Hawaii and is the fifth leading cause of death for residents, accounting for approximately 50-60 deaths annually. Therefore collecting, measuring and tracking drowning data both locally and statewide is crucial. The state of Hawaii has been a CARES participant since 2011. Its participation is unique in that all of the transporting EMS providers are on the same electronic patient care reporting system, allowing for 100% state population coverage. According to CARES data (2013-2018), drowning causes are attributed to an average of 5% of the total cardiac arrest cases annually in Hawaii, which is far above the national average drowning rate of 0.5%. Dr. Libby Char, a Medical Director for several first responder and ocean safety agencies in Hawaii, who was instrumental in bringing CARES to the state and in developing the drowning module explains how important this information is for the state, "Drowning is one of the most important challenges we face in EMS and we need more data to be able to fully understand the problem, improve our EMS response and to create prevention programs with the goal of saving lives." John Titchen, the Chief of Ocean Safety for the city and county of Honolulu, is responsible for all beach and water safety on the island of Oahu, Hawaii's most populous island. Chief Titchen manages the daunting task of overseeing 16 mobile and 41 tower patrol/rescue services, a total of 250 employees and a budget of \$19 million. "Drowning statistics are essential for the deployment of personnel, review of budget requests and the majority of administrative decisions for my department", Chief Titchen explains. Although Hawaii Department of Health compiles drowning data for the state, only the aggregate metrics are shared annually. This makes it difficult to utilize the data quickly and effectively. CARES will compliment and improve the existing drowning data in terms of the ability to monitor real-time metrics. The information pertaining to the location of the drowning, age of the patient, the activity at the time of submersion and lifeguard response collected by CARES will be invaluable to the Department of Ocean Safety, the Oahu community and state as a whole.

The changing ecological environment in Hawaii, and in the tourist population, adds to the complexity in planning for ocean safety and EMS response. The rising ocean tides are moving people from the once most populated beaches to other areas of the island. The traditional lifeguard towers are cemented into the ground but now there is a need to consider mobile towers that can be moved based on the data CARES can provide. In addition, the influence of new, emerging vacation rental methods is impacting the type of tourist coming to Hawaii and therefore the recreational activities people are engaging in. "The need for ongoing data collection to modernize our approach to ocean safety and



Ocean Safety Honolulu personnel conduct a search for a missing 20-year-old swimmer, suspected of drowning, at Waimea Bay on the North Shore of Oahu.

innovate drowning prevention programs has never been greater" explains Chief Titchen. Hawaii has numerous drowning prevention programs targeted to the various audiences that are engaging in water activity: tourists, triathletes, surfers and school-aged children to name a few. CARES data will allow prevention campaigns and trainings to be better tailored to each group, maximizing effectiveness and ensuring the strategic allocation of valuable resources. Hawaii EMS and Ocean Safety Officials hope that the new drowning dataset will allow for quicker analysis of real-time trends to better respond to and treat drowning patients across the state. Dr. Libby Char summarizes, "The utilization of CARES drowning data is the next step to decrease the number of drowning arrests statewide and to hopefully put us in a position to prevent drownings. It will make the islands as safe as possible for tourists, residents and the responders that risk their lives to save these patients."