

CARES Drowning Module Overview

Why collect drowning data elements?

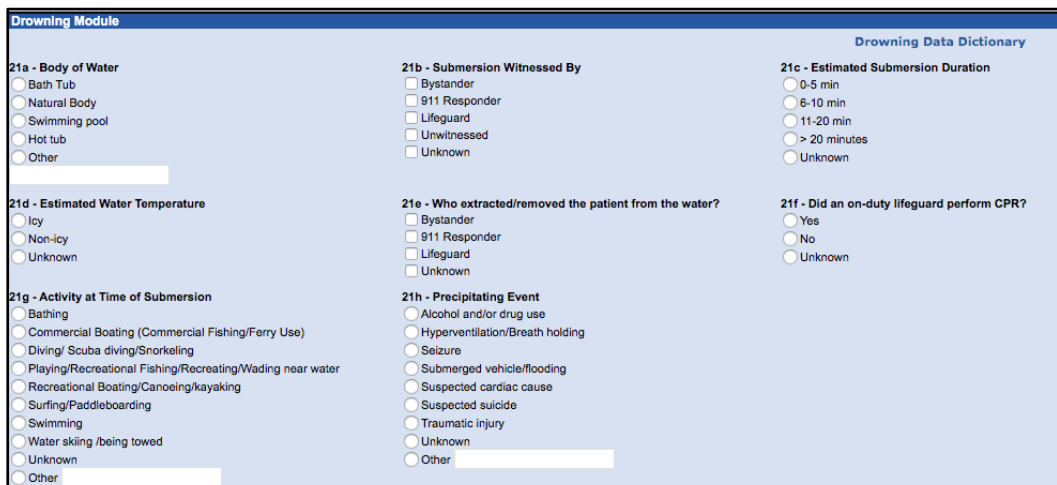
Drowning is a leading cause of preventable death; however, there is a lack of quality data around the topic. In 2015, the International Liaison Committee on Resuscitation (ILCOR) issued an Advisory Statement on Utstein-style Recommended Guidelines of Data From Drowning Related Resuscitation, emphasizing the importance of collecting this data in resuscitation registries such as CARES.¹ In 2018, members of the American Red Cross Scientific Advisory Council - Aquatics Subcommittee requested help to address the absence of national drowning resuscitation data. The additional drowning data elements were developed balancing data benefit while minimizing data entry burden. The goal is to help improve national surveillance and our understanding of these events to develop effective prevention strategies to save lives, especially in the pediatric population.

What percentage of OHCA cases does this impact?

According to the 2018 CARES national dataset, “drowning/submersion” is selected as the cardiac arrest etiology in only 0.5% of adult arrests. In pediatric arrests, it is selected as the cardiac arrest etiology in about 9% of cases. Therefore, the impact to the overall data collection burden in CARES is minimal while the benefits to national resuscitation efforts are significant.

What elements are being collected?

The additional elements are limited to those that provide the most impactful information. There are a total of 8 drowning data elements (screenshot below). These supplemental fields will only be requested when drowning/submersion is chosen as the arrest etiology.



| Drowning Module | | Drowning Data Dictionary |
|--|--|---|
| 21a - Body of Water <input type="radio"/> Bath Tub <input type="radio"/> Natural Body <input type="radio"/> Swimming pool <input type="radio"/> Hot tub <input type="radio"/> Other | 21b - Submersion Witnessed By <input type="checkbox"/> Bystander <input type="checkbox"/> 911 Responder <input type="checkbox"/> Lifeguard <input type="checkbox"/> Unwitnessed <input type="checkbox"/> Unknown | 21c - Estimated Submersion Duration <input type="radio"/> 0-5 min <input type="radio"/> 6-10 min <input type="radio"/> 11-20 min <input type="radio"/> > 20 minutes <input type="radio"/> Unknown |
| 21d - Estimated Water Temperature <input type="radio"/> Icy <input type="radio"/> Non-icy <input type="radio"/> Unknown | 21e - Who extracted/removed the patient from the water? <input type="checkbox"/> Bystander <input type="checkbox"/> 911 Responder <input type="checkbox"/> Lifeguard <input type="checkbox"/> Unknown | 21f - Did an on-duty lifeguard perform CPR? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown |
| 21g - Activity at Time of Submersion <input type="radio"/> Bathing <input type="radio"/> Commercial Boating (Commercial Fishing/Ferry Use) <input type="radio"/> Diving/ Scuba diving/Snorkeling <input type="radio"/> Playing/Recreational Fishing/Recreating/Wading near water <input type="radio"/> Recreational Boating/Canoeing/kayaking <input type="radio"/> Surfing/Paddleboarding <input type="radio"/> Swimming <input type="radio"/> Water skiing /being towed <input type="radio"/> Unknown <input type="radio"/> Other | 21h - Precipitating Event <input type="checkbox"/> Alcohol and/or drug use <input type="checkbox"/> Hyperventilation/Breath holding <input type="checkbox"/> Seizure <input type="checkbox"/> Submerged vehicle/flooding <input type="checkbox"/> Suspected cardiac cause <input type="checkbox"/> Suspected suicide <input type="checkbox"/> Traumatic injury <input type="checkbox"/> Unknown <input type="checkbox"/> Other | |

How are these elements defined?

CARES created a data dictionary for the drowning module. Like the standard CARES data dictionary, the drowning data dictionary includes definitions and coding examples for reference. Please see the [CARES drowning data dictionary](#) for more information.

How do I obtain more information?

Please feel free to reach out to your CARES liaison or your CARES state coordinator for more information. For general inquiries, please reach out to the CARES team at cares@emory.edu.

¹ Idris A., Bierens J., Perkins G., Wenzel V., Nadkarni V., Morley P., Warner D., Topjian A., Venema A., Branche C., et al. 2015 Revised Utstein-style recommended guidelines for uniform reporting of data from drowning-related resuscitation: An ILCOR advisory statement. *Resuscitation*. 2017;118:2224–2226.