

Cardiac Arrest Registry to Enhance Survival (CARES)

Drowning Data Dictionary



**PLEASE NOTE: This data dictionary is intended for CARES end users. ePCR vendors and programming staff should only use the XML data dictionary found at:
https://mycares.net/cares_xml_upload_docs.jsp.**

CARES DROWNING DATA ELEMENT OVERVIEW

The CARES Drowning Dataset is only applicable to those cases where “Drowning/Submersion” is selected as the “Presumed Cardiac Arrest Etiology.”

Additional Notes:

- For those agencies utilizing desktop data entry, the drowning dataset will appear in a new section of the CARES form when ‘Drowning/Submersion’ is selected as the cardiac arrest etiology.
- For those agencies utilizing ePCR upload, the drowning dataset will need to be completed during the audit process as these data elements will not be available in your ePCR.
- In order for these additional questions to be answered accurately and completely, please consider training your field providers to include this information in the ePCR narrative for applicable cases.

The sources that were used for the development of the dataset and dictionary include the International Liaison Committee on Resuscitation (ILCOR) Advisory Statement on Utstein-style Recommended Guidelines of Data From Drowning Related Resuscitation and other state or community drowning resources when available. Guidance was also obtained from members of the American Red Cross Scientific Advisory Council Aquatics Subcommittee and the CARES Advisory Council.

Please feel free to contact CARES staff at cares@emory.edu with any questions or comments regarding this document.

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21a. BODY OF WATER

Definition/Description:

- Record the type of aquatic location where the patient drowned. If an existing answer choice is not relevant, please use the “Other” category and specify the location of the drowning.
- Allows for categorization of drowning etiology cardiac arrests to the drowning location. This may allow for a greater understanding of high frequency drowning locations that can be targeted for prevention or response programs.

Instructions for Coding:

- Select the category that is most appropriate based on the definitions below.
- If the body of water is not included in one of the defined categories, select “Other” and describe the body of water in the free text field.

Body of Water	Definition
Bathtub	Receptacles for water commonly used for bathing that are emptied after use. This includes any bathtub regardless of location. Options include bathtubs in a home/residence, apartment, hotel or other building.
Natural Body	Includes a natural body of water in an outdoor environment. Specify the subcategory as closely as possible.
Swimming Pool	Includes both indoor and outdoor pools for swimming and is capable of holding water to a depth of approximately 1 foot/12 inches or more. This includes inflatable pools.
Hot tub	A large tub filled with heated aerated water used for recreation or physical therapy. This is generally found outside and is not emptied after each use.
Other	To be used when the body of water is not included in the above categories. When this option is selected, please indicate/describe the type of body of water in the free text field.

Example	CARES Coding
The patient was found in an outside hot tub at her apartment building.	Hot tub – Condo/apartment
The child was visiting a neighbor’s home and was found submerged in the pool.	Swimming Pool – Home/Residence (Other person’s pool)
A fisherman was fishing on the bank of a river when he fell into the water and was rescued by a friend.	Natural body – River/Creek

21b. SUBMERSION WITNESSED BY

MULTI-SELECT DATA ELEMENT

Definition/Description:

- Witness status of the drowning.
- A witnessed drowning is one seen or heard by another person. This includes someone seeing or hearing the drowning patient enter the water or struggling before disappearing under the water.

Instructions for Coding:

- Select the witnessed status that is most appropriate based on the definitions below.
- If more than one person witnessed the submersion, please indicate all that apply.

Arrest Witnessed	Definition
Bystander	Submersion witnessed by a bystander not responding to the emergency in an official capacity (i.e. not part of the 911 response team and not the lifeguard on duty). Known family members, medical providers not part of the official 911 response and off-duty lifeguards are included in this group.
911 Responder	Submersion witnessed by 911 personnel who respond to the medical emergency in an official capacity as part of an organized medical response team. This includes both responders that transport and do not transport.
Lifeguard	Submersion witnessed by an individual who is employed to monitor those swimming in a designated area and rescue those in danger.
Unwitnessed	The drowning is neither seen nor heard by another person. This includes patients found after an unknown period of time.
Unknown	No information exists in the run sheet that would allow for categorization in the above options.

Example	CARES Coding
The patient was found in the water by a family member. The family member did not see or hear the patient submerge in the water.	Unwitnessed
The patient's brother saw the patient fall into the water.	Bystander
A lifeguard that was on duty at the neighborhood pool saw the child fall into the water and quickly jumped in to rescue the patient.	Lifeguard

21c. ESTIMATED SUBMERSION DURATION

Definition/Description:

- The estimated time interval or duration that the patient was underwater.
- Duration underwater is derived from the time the face was first seen to be underwater to the time of removal from the water.
- This is the most important predictor of outcome in drowning.

Instructions for Coding:

- Select the estimated time interval that most closely aligns with the duration the patient was underwater.

Example	CARES Coding
It was a witnessed submersion in private pool and the patient was promptly extracted from the water.	0-5 minutes
A swimmer drowned in a crowded pool. Witnesses reported seeing the swimmer jumping off the diving board a little more than 5 minutes prior to the patient being removed from the water.	6 -10 minutes
Bystanders witnessed the submersion of a man in the ocean. On-duty lifeguards immediately initiated rescue efforts, however, were unable to locate the patient for approximately 15 minutes. Once the patient was found, he was immediately removed from the water and CPR was initiated.	11-20 minutes
A swimmer drowned in a deep-water lake and it took rescue crews over 45 minutes to find the patient and remove her from the water.	> 20 minutes
The submersion was unwitnessed and there is no estimate as to how long the patient was underwater.	Unknown

21d. ESTIMATED WATER TEMPERATURE

Definition/Description:

- Estimation of water temperature at time of drowning.
- “Icy” water is defined as estimated water temperature at equal to or less than 32 degrees Fahrenheit or 0 degrees Celsius.
- “Non-icy” water is defined as estimated water temperature at more than 32 degrees Fahrenheit or 0 degrees Celsius.

Instructions for Coding:

- Select the estimated temperature that most closely describes the water at time of drowning.

Estimated Water Temperature	Definition
Icy	Estimated water temperature at or < 32 degrees Fahrenheit or 0 degrees Celsius
Non-icy	Estimated water temperature > 32 degrees Fahrenheit or 0 degrees Celsius

Example	CARES Coding
Water temperature was not recorded in the ePCR; however, the lake water was publicly reported to be approximately 30 degrees at the time of the drowning.	Icy
The drowning occurred off the coast of a beach in August in North Carolina.	Non-icy

21e. WHO EXTRACTED/REMOVED THE PATIENT FROM THE WATER?

MULTI-SELECT DATA ELEMENT

Definition/Description:

- Identifies the individual(s) extracting/removing the patient from the water.

Instructions for Coding:

- If more than one person extracted/removed the patient from the water, please indicate all that apply.

Who extracted/removed the patient from the water?	Definition
Bystander	A bystander not responding to the emergency in an official capacity (i.e. not part of the 911 response team and not the lifeguard on duty). Known family members, medical providers not part of the official 911 response and off-duty lifeguards are included in this group.
911 Responder	911 personnel who respond to the medical emergency in an official capacity as part of an organized medical response team. This includes both responders that transport and do not transport.
Lifeguard	An individual who is employed to monitor those swimming in a designated area and rescue those in danger.
Unknown	No information exists in the run sheet that would allow for categorization in the above options.

21f. DID AN ON-DUTY LIFEGUARD PERFORM CPR?

Definition/Description:

- Identifies whether an on-duty lifeguard performed CPR during the resuscitation.
- Cardiopulmonary resuscitation (CPR) is an attempt to restore spontaneous circulation by performing chest compressions with or without ventilations.

Instructions for Coding:

- For the answer to be “Yes”, CPR must have been performed by a lifeguard that is on-duty at the time of the drowning.
- A lifeguard is defined as an individual who is employed to monitor those swimming in a designated area and rescue those in danger.
- If an off-duty lifeguard performs CPR, the answer should be coded as “No”.

Example	CARES Coding
A lifeguard at a gym pool witnessed a drowning and immediately pulled the patient out of the water and performed CPR.	Yes
A dad found his child submerged at their home pool. The duration of submersion is unknown, but the dad removed the patient from the water and initiated CPR.	No

21g. ACTIVITY AT TIME OF SUBMERSION

Definition/Description:

- Record the type of activity being undertaken immediately prior to drowning if known.

Instructions for Coding:

- Select the category that is most appropriate based on the information on the EMS run sheet.
- If the activity is not included in one of the defined categories, select “other” and describe the activity in the free text field.
- If there is no information in the run sheet that would allow for the activity at time of submersion to be categorized in the answer choices, please select “unknown”.
- The difference between bathing and swimming is distinguished by the location of the incident and the intent of the activity. Bathing is defined as submerging the body in water for the purposes of relaxation or cleaning. This occurs in bathtubs or in hot tubs. Swimming is defined as an individual being in the water either partially or fully submerged and performing recreational or swimming activities. This includes structured swimming (e.g. competition), unstructured swimming (e.g. recreational) and recreating (e.g. floating but not swimming). This occurs in pools and open water.

Example	CARES Coding
A 1-year old patient was found in the bathtub at her home fully submerged in water.	Bathing
An employee of a large commercial fishing vessel fell overboard and had to be rescued by another employee who witnessed the incident.	Commercial Boating
A couple was scuba diving when the man ran out of oxygen and drowned.	Diving/Scuba diving/Snorkeling
A child was playing soccer around their home swimming pool when she fell into the water.	Playing/Recreational Fishing/ Recreating/Wading near water
Prior to the incident, the patient was last seen kayaking on a lake.	Recreational boating/ Canoeing/Kayaking
A lifeguard at a local beach had to rescue a surfer who had hit her head on a rock.	Surfing/Paddleboarding
A patient disappeared into the water while playing in the ocean at a local beach.	Swimming
The patient was tubing on a lake when he dropped into the water and did not resurface.	Water Skiing/being towed

21h. PRECIPITATING EVENT

Definition/Description:

- An initiating event or factor that is causally related to the drowning. Evidence may be obtained from the scene of the drowning or from witnesses and family members.

Instructions for Coding:

- Select the category that is most appropriate based on the information in the EMS run sheet.
- If the known precipitating event is not included in one of the defined categories, select “Other” and describe the event in the free text field.
- If ‘traumatic injury’ is selected as the precipitating event, this case should be re-coded in the core CARES dataset as a traumatic arrest for #21 “Presumed Cardiac Arrest Etiology” (example below*).

Example	CARES Coding
Prior to the drowning, the patient was last seen intoxicated on his boat. Friends reported the patient had consumed numerous alcoholic beverages throughout the day.	Alcohol and/or drug use
The patient lost control of her vehicle while on a bridge. The vehicle broke the bridge barrier and fell into the river below.	Submerged vehicle/flooding
The patient was jumping off a mountain cliff into a lake. The patient hit his head on a rock prior to falling into the water. *	Traumatic Injury
An adult known to experience seizures was swimming in a public pool. Bystanders reported seizure-like activity prior to the drowning.	Seizure