



ILS Drowning Prevention and Public Education Commission

Minimum Data Set on Fatal Drowning: Coding and
Definitions Manual

Version 1

Coding and Definitions Manual –Minimum Data Set on Fatal Drowning

Background

Drowning data collection and analysis of drowning statistics occurs in many countries around the world to varying degrees of sophistication. There is a need for basic documentation to outline a consistent set of codes and terminology for collecting data on fatal drowning and as a starting point for countries wishing to commence collecting and analysing fatal drowning data for research and prevention purposes.

This document will be a coding manual and data dictionary outlining a minimum set of variables for collection of fatal drowning data. The document will include the coding framework for each variable and definitions of each of the codes where relevant (i.e. aquatic location, activity prior to drowning).

Purpose

The aim of this project is to define a basic set of data codes (and subsequent definitions) for drowning data collection and analysis and has been developed those countries or organisations in mind that might be starting on a project such as this for the first time.

The aim was two-fold – to propose a minimum dataset of variables to move towards global consistency of codes and definitions and also to provide a starting point for data collection, coding and analysis for countries or organisations that are just starting to collate drowning data.

The aim is for this resource to be useful for all countries (both HIC and LMIC) and suitable for use when collecting data from a variety of sources with a variable level of detail available.

The project at this stage is intended for use when collecting data on fatal, unintentional drowning but could be expanded in the future.

Project Scope

This document will aim to outline 10-15 key variables needed for analysing frequencies and trends in fatal drowning data. These variables will include age, sex, aquatic location, activity prior to drowning, consideration for geographic location (e.g. state, county, province) among others.

Constraints and Assumptions

Particular attention will need to be paid to differences in aquatic environments and potentially the activities being undertaken prior to drowning, as well as geographical location (state, county, province etc) to ensure that this guide is able to be used by all countries with an interest in collecting and analysing fatal drowning data. It needs to be robust but also simple enough to be able to be modified (where relevant) to account for regional differences.

Project Team Structure

Amy Peden (Royal Life Saving Society – Australia)

Barbara Byers (Royal Life Saving Canada)

Additional project team members: Erik Bech - Denmark

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Key Variable	Required or Optional	Explanation	Proposed Codes	Coding Framework
1. Drowning Death Identifier	Required	This is to identify each individual drowning death and might be done based on location, year of death or some other format.	Eg 2012.1 2012.2 Could explore use of internet country code prefix – e.g. AU 2013 219 DE 2013 486 DK 2013 061 For multiple fatality incident: UK 2013 099a UK 2013 099b UK 2013 099c	Use internet country code prefix, followed by year of incident, followed by incident number (this must differ for each victim). If the incident is a multiple fatality incident then use a,b,c after incident number to denote number of victims
2. Year of Incident	Required	Allows year to year trends and comparisons to be made.	2011 2012 2013	
3. Age in Years	Required	Allows for different coding based on age groups to be done	Less than 2 months 2 to 3 months 4 to 5 months 6 to 8 months 9 to 11 months 1 2 3 4	
4a. Age Groups (WHO)	Optional – choose either 4a or 4b	Allows for coding of data and analysis to be done in line with World Health Organisation’s Standard age groups	0-4 5-9 10-14 15-19 20-24 25-29 30-34 35-39 40-44	

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			45-49 50-54 55-59 60-64 65-69 70-74 75-79 80-84 85+	
4b. Age Groups (CDC)	Optional– choose either 4a or 4b	Allows for coding of data and analysis to be done in line with Centre for Disease Control and Prevention Standard age groups	Under 1 year 1-4 5-14 15-24 25-34 35-44 45-54 55-64 65-74 75-84 85 and over	
5.Sex	Required	Record the sex of the individual who drowned and determine trends & prevention strategies	Male Female Unknown	1.00 – Male 2.00 – Female 9.00 – Unknown
6.Location of Incident / point of entry	Required	Record the type of aquatic location where the victim drowned if known. If no existing code is relevant please use the ‘other’ category and specify the type of activity	Bathtub / Spa Bath (inside house) Beach Lake / Dam / Lagoon (enclosed bodies of water, don’t generally flow) Fiord Ocean / Harbour (how to classify distance from the coast?) Pond Estuary Marina River / Creek / Stream Rocks/ Rocky Foreshore	1.00 – Bathtub / Spa Bath Etc etc

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			<p>Private Swimming Pool (home pool, spa pool, paddling or inflatable pool)</p> <p>Public Swimming Pool (includes hotel, motel, school pool, hospital pool etc)</p> <p>Spa / Hot Tub (outdoor)</p> <p>Tank</p> <p>Well</p> <p>Bucket</p> <p>Drain</p> <p>Rice Paddy</p> <p>Irrigation Ditch</p> <p>Flood Waters</p> <p>Other (please specify)</p> <p>Unknown</p>	
7.Type of Activity	Required	<p>Record the type of activity being undertaken immediately prior to drowning if known. If no existing code is relevant, please use the 'other' category and specify the type of activity. If activity prior to drowning is not known, use the code Unknown.</p>	<p>Bathing</p> <p>Diving (scuba, snorkeling, free diving, spear fishing etc)</p> <p>Fall</p> <p>Fishing – Angling / Net Fishing / Shell Fishing</p> <p>Jumped In (intentionally entered the water eg from bridge, tree etc)</p> <p>Non-aquatic transport (eg cars, planes, helicopters, motorbikes etc)</p> <p>Rescues</p> <p>Rock Fishing</p> <p>Swept In (commonly associated with flooding etc)</p> <p>Swimming and Recreating</p> <p>Surfing</p> <p>Watercraft</p> <p>Snowmobiling</p> <p>Tubing / Canyoning</p> <p>Waterskiing</p> <p>Windsurfing</p> <p>Other (please specify)</p> <p>Unknown</p>	<p>1.00 – Bathing</p> <p>.....</p>

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7a. Type of Activity - Other	Optional	Country specific activities not recorded in section 7 to be added here	<i>Additional country specific activity detail to be included here when circulated for review</i>
8. Geographical location of incident	Optional	Record the geographical location of the drowning incident. This will depend on system used in your country. It may be states, provinces, communes etc. If available could use the GPS coordinates or region of the drowning.	For example – Australian States and Territories ACT, NSW, QLD etc Canadian Provinces British Columbia, Alberta etc	
9. Month of Incident	Optional	Record the month of the drowning death. If month of incident and death differ, record date of incident (i.e. if someone drowns in June and is admitted to hospital but dies in July)	January February March April May June July August September October November December	1.00 - January 2.00 - February 3.00 - March 4.00 - April 5.00 - May 6.00 - June 7.00 - July 8.00 - August 9.00 - September 10.00 - October 11.00 - November 12.00 - December
9a.Seaon the Incident Occurred In	Optional	Record the season in which the drowning incident occurred. If your country has different seasons, eg wet and dry, please amend codes as needed	Summer Autumn / Fall Winter Spring Wet Dry Monsoon Other (please specify) Unknown	<i>Additional country or region specific options to be included when circulated for review</i>

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10. Time of Day	Optional	Record the time of day or night that the drowning incident took place (if the victim died later, record the incident time)	Daytime (5 am – 5:59 pm) Evening (6 pm-9:59 pm) Night (10 pm- 4:59 am)	
11. Alcohol involved?	Optional	Record, if known, whether alcohol was consumed by the victim prior to drowning	Yes No Unknown	1.00 – Yes 2.00 - No 9.00 - Unknown
12. Purpose	Optional	How did the person come to be in or around the water?	Recreational Daily living Occupational Other (please specify) Unknown	1.00 – Recreational 2.00 – Daily living 3.00 – Occupational 4.00 – Other 5.00 - Unknown
13. Boating Incident by Type of Vessel	Optional (leave blank if not boating related drowning death)	If a drowning death involves a boat, record the type, if known. Record based on if it has a motor or not (regardless of whether motor was used).	<u>Powered</u> Less than 5 metres in length 5 metres to 9.9 metres 10 metres and longer Jet Boat Jet Ski Houseboat Ferry Other Powered – Unknown Length Powered – Unknown type <u>Unpowered</u> Less than 5 metres in length 5 metres to 9.9 metres 10 metres and longer Aquabike Boogie Board	

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			Surfboard Canoe Kayak Inflatable Boat Other Unpowered – Unknown type Unpowered – Unknown length	
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Definitions

6. Location of incident / point of entry

Bathtub / Spa Bath (inside house): Receptacles for water commonly used for bathing that are emptied after use. Showers included in this code. Spa baths are those used for both bathing and relaxation that are found inside the home and generally have water jets and are emptied after use. ¹

Beach: The sloping shore along a body of water that is washed by waves or tides and is usually covered by sand or gravel. ²

Lake / Dam / Lagoon: A lake is defined as a body of water (fresh or salt) of considerable size, surrounded by land. ³ A dam is defined as an enclosed body of water with banks or barriers on all sides. They may also have one wall and use gravity of water flow to ensure the water remains contained. Dams may vary in size and depth, e.g. sizable recreational dams and or smaller bodies of water such as farm dams. A lagoon is a small, pond-like body of water, especially one that may be connected with a major body of water. A lagoon may also be an area of shallow water separated from the sea by low sandy dunes. ⁴

Fjord: A long, narrow, deep inlet of sea between high cliffs, as in Norway, typically formed by submergence of a glaciated valley. ⁵

Ocean / Harbour: Oceans are defined as vast body of open water – may be unprotected – includes sea and drowning deaths that occur offshore. ¹ Harbours are generally defined as a sheltered area of water where ships or other watercraft can anchor or dock ².

Pond: A small body of still water, generally smaller than a lake, that is formed naturally or by artificial means ⁶. This code includes fish ponds, that is Receptacles used to hold water that is not emptied and houses fish, plant life or other ornamental features. ¹

Estuary: Part of a river or stream or other body of water having connection with the open sea, is subject to the sea's tides and its effects and the sea water is diluted with fresh water ³.

Marina: A specially designed harbour with moorings for pleasure yachts and small boats. ⁷

River / Creek / Stream: A river is a natural waterway that may be fed from other rivers or bodies of water draining water away from a "catchment area", to another location. Rivers can vary in water flow, length, width and depth. ⁴ A creek is a water body that may be fed by rivers and other creeks. A creek is generally smaller in size than a river and is often characterised by intermittent water flow. Creeks can be prone to more extreme conditions of stasis in drought and flash flooding after rainfall ⁴. A body of flowing water generally smaller than a river. May also be seasonal and not always contain water. ¹

Rocks/ Rocky Foreshore: Rock formations, cliff faces or rocky outcrops generally alongside the ocean. These may also be found beside inland waterways such as waterfalls and gorges. ¹

Private Swimming Pool: A swimming pool that is situated (either under construction or installed) on premises on which a residential building is located ⁸. Includes both indoor and outdoor pools at residential locations. Is

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capable of holding water to a depth of 300mm or more. Includes home pool, paddling or inflatable pool commonly on private land. A portable pool is defined as any moveable structure intended for swimming or other water recreation that is less than 300mm in depth. ¹

Public Swimming Pool: A public swimming pool is a public, built structure that can be filled with water and intended to be used for swimming, diving, wading or paddling. Cannot be emptied by a simple overturning of the structure. ¹

Spa / Hot Tub (outdoor): Receptacle for bathing (usually with jets) that is generally found outside the house and is not emptied on a regular basis. ¹

Tank: Large receptacle used for holding water for drinking or irrigation. Varies in size and generally is not emptied unless during normal use or for cleaning. Can be found both at the urban residence, commercial buildings and on rural properties. Includes reservoirs. ¹

Well: A hole drilled into the earth, generally by boring, to obtain water. ³

Bucket: A receptacle Receptacles that are capable of holding water and are capable of emptying after use. ¹

Drain: A channel or pipe carrying off surplus liquid, especially rainwater or liquid waste ⁹. This code includes storm water drains.

Rice Paddy: A flooded field or paddock in which rice is grown. ¹⁰

Irrigation Ditch: An irrigation channel is a built structure that facilitates the movement of water from one location to another, from a supply area (e.g. a river or dam although not always the case) to be distributed for agricultural purposes ⁴.

Flood Waters: Waters associated with a general and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal waters from the unusual and rapid accumulation of runoff of surface waters from any source. ¹¹

Other (please specify): Code used when drowning location cannot be classified into any of the existing codes. ¹

Unknown: Code used where there is insufficient information to classify location of drowning death. ¹

7. Type of Activity

Bathing: Submerging the body in water for the purposes of relaxation or cleaning. Generally not vigorous activity. ¹

Boating: Water-based wind or motor powered vessels, boats, ships and personal watercraft (e.g. boats, jet skis, sail boats, yachts, catamarans). ¹²

Diving: The sport or activity of exploring or swimming under water. ¹ Includes the activities of scuba diving, snorkeling, free diving, spear fishing among others.

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Fall: Unintentional entry into the water from land. ¹

Fishing: The act of catching fish from all environments except those classified as rock fishing. ¹ Fishing from rocks, rocky outcrops and cliffs must be coded as 'Rock Fishing'. Includes angling, net fishing, shell fishing etc.

Jumped In: The act of intentionally jumping in the water from a variety of different objects. ¹ Includes dive entry, jumping in from bridges trees, waters edge, rocks, piers and jetties etc.

Non-aquatic transport: The act of entering the water, either intentionally or unintentionally whilst operating any kind of vehicle, otherwise not classified under watercraft (powered and unpowered). ¹ Includes bicycles, cars, helicopters, motorbikes, paragliders, planes, quad bikes, machinery (e.g. tractors) and trucks among others.

Rescues: The act of attempting to pull an object, animal or person out of the water who may be in danger. ¹ Includes rescuing humans and animals.

Rock Fishing: Fishing from rocks, rocky outcrops, cliffs. This activity should always be linked to the location grouping of rocks. ¹

Swept In: Unintentional entry to water, commonly associated with being swept into water by waves off rocks and being swept in by floodwaters. ¹

Swimming and Recreating: Already in the water either partially or fully submerged and performing recreational or swimming activities. ¹ Includes structured swimming (e.g. competition), unstructured swimming (e.g. recreational) and recreating (e.g. floating but not swimming).

Surfing: The sport or pastime of riding a wave towards the shore while standing or lying on a surfboard. ¹³

Watercraft: Water-based non-powered recreational equipment such as those that are rowed or paddled (e.g. rowboats, surfboards, kayaks, canoes, stand up paddle boards, boogie boards, windsurfers, inflatable rafts and inflatable boats without motors). ¹² Includes unintentional entry (i.e. a fall) from watercraft.

Snowmobiling: The act of travelling or recreating using a small motorized vehicle with ski-like runners in front and tank-like treads, ridden by straddling a seat and used for driving in or traveling on snow. ¹⁴

Tubing / Canyoning: Tubing is defined as the leisure activity of riding on water or snow in a large inflated inner tube. ¹⁵ Canyoning is defined as the sport of jumping into a fast-flowing mountain stream and allowing oneself to be carried downstream at high speed. ¹⁶

Waterskiing: The act of being towed behind watercraft. Included the wearing of skis, wakeboarding etc. ¹

Other (please specify): Code used when activity being undertaken immediately prior to drowning cannot be classified into any of the existing codes. ¹

Unknown: Code used where there is insufficient information to classify activity being conducted immediately prior to drowning. ¹

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12. Purpose

Recreational: Drowning that occurs whilst undertaking an activity for enjoyment (often in leisure time) and that is not associated with work (either paid or unpaid).

Daily Living: Relates to drowning that occurs as a result of the activities of every day life, e.g. fetching water, travelling to work, home, school; household cleaning and maintenance.

Occupational: Drowning that occurs during the course of a job or profession (most commonly where someone is paid to complete the work).

Other (please specify): Code to be used for drowning that occurs that cannot be coded as recreational, daily living or occupational.

Unknown: Code to be used where it is not known what the purpose was of the activity the victim was engaged in.

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