



WEEKLY EPIDEMIOLOGICAL REPORT

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Drowning

According to the world congress on drowning held in 2002, drowning is defined as the process of getting respiratory impairment from submersion or immersion in liquid. It is the third main cause of death due to unintentional injuries worldwide.

Prevalence

World health organization estimated that about 23600 people died due to drowning in 2019.60 % of these deaths are among people under thirty years. However, data suggests that there is uncertainty regarding the number of drowning deaths worldwide as those caused by floods and water transport events might have been excluded. Worldwide, drowning is the sixth major cause of death among children between 5-14 years. The highest drowning rates have been recorded in WHO western pacific region. More than 90% of unintentional deaths due to drowning take place in low- and middle-income countries. This is because in these countries,

1. many people are living in flood-prone areas.
2. Disaster preparedness and response activities like early warning systems, evacuation and rescuing are not well developed.
3. Individuals engage in fishing for subsistence using unprotected boats.
4. Lack of education.
5. People try to migrate illegally by unsafe overcrowded boats.

Risk factors

Age is the main risk factor. Children 1-4 years have the highest drowning rates globally followed by 5-9 years. This is mostly due to the lack of supervision by adults. For example, children left unattended in bathtubs have been identified as a

major reason for drowning-related deaths of them. Males are at higher risk for drowning than females as they have increased access and exposure to water and they engage in risky behaviours like swimming alone or getting into the water under the influence of alcohol. People especially children living near open water sources like rivers, ponds and wells and those who live in flood-prone areas and fishermen who use small boats with no safety measures are at increased risk for drowning. Lack of education, inability to swim and some medical problems like epilepsy and myocardial infarction can be identified as other risk factors. Drowning is a high lethality method used by people who commute suicide.

Sri Lankan Situation

Sri Lanka is an island. As it is surrounded by the coast, a lot of local and foreign travellers visit sea areas so often. Also, being a tropical country generally, it has hot weather throughout the year so it encourages people to engage in water activities. Sri Lanka has many natural water resources like ponds, rivers and waterfalls. There is increased development of resorts and hotels in the past few decades in the country with swimming pools and other water activities. Owing to its situation in the Indian Ocean, Sri Lanka faces two monsoons. Flooding is a common natural disaster in Sri Lanka mainly in central, western and southern provinces followed by southwest monsoon mainly caused by the overflow of the rivers while man-made activities like deforestation and wetland filling are contributory factors. Due to all facts mentioned above, people in Sri Lanka face a higher risk of drowning.

According to the drowning prevention report in Sri Lanka published in 2020 by Sri Lanka lifesaving, drowning is the leading

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cause of death by injuries in the group of children between 1 to 4 years of age and it is the third cause of death from accidental injuries among all age groups. There were 755 average drowning deaths each year (3.5 deaths per 100000 population) in Sri Lanka during the period 2016 to 2018. According to the report, there was a 20 per cent reduction in the drowning rate, compared to that between 2005 to 2007. The highest age-specific drowning rate was among persons aged 65 years and above. The highest crude drowning rate was in the northern province which was 7.3 per 100000 population. Waterways including lakes were the highest drowning locations nationally (26%) followed by canals and seas including beaches and ocean and wells lastly.

Related deaths

Drowning-related deaths can be associated with body entrapment, and hair entanglement and are caused by several causes such as hypothermia, hypoxia, hypoxaemia, sudden cardiac arrest, aspiration pneumonia, chemical pneumonitis, renal dysfunction, cerebral oedema, fluid and electrolyte imbalance. The outcomes of drowning are categorized as death, morbidity and no morbidity.

Prevention

It is important to make suitable water safety plans following risk assessment at the community level. Prevention strategies for drowning should be developed for geographic areas where there are natural swimming places. Warning displays, developing fences at sites where there is an increased risk around the lakeside and covering wells reduce exposure to water hazards. Regulations such as prohibiting alcohol by boat operators and occupants, and prohibiting jumping into water or swimming in risky areas are important to prevent drowning-related injuries and deaths. It is mandatory to establish basic safety requirements in designated water activity areas such as placing certified lifeguards, being ready with equipment like life jackets, lifebuoys with lifelines and personnel floatation devices as well as necessary emergency medical services. There are safety boat engines with self-starting devices. It is very important to supervise young children around water. Young people should be discouraged to take risky behaviours during water activities. Swimming lessons including basic water safety skills for school children greatly help prevent drowning and these should be undertaken with the establishment of safety measures. Special programmes such as CPR training in places like resorts are beneficial. Setting legislation and regulations like ferry regulations is important for water safety. Disaster preparedness plans for floods such as land use regulations, building resilience for flooding, early warning systems and early response can reduce the effects of flood disasters including drowning-related injuries and deaths.

There are many stakeholders in drowning prevention in Sri Lanka. Sri Lanka lifesaving association, Sri Lanka coast guard, Triforce, Department of meteorology, Disaster management centre, Ministry of Fisheries, Ministry of Education, Ministry of Health and Ceylon tourist board are such institutes. In 2018/2019 in Sri Lanka there were 2364 active lifeguards and over 300 rescues had been performed by them per year. There were 46 operative lifesaving clubs, and 235 lifesaving patrol points and

over the past ten years more than one million persons had received education on water safety.

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References

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<https://www.who.int/news-room/fact-sheets/detail/drowning>
https://www.who.int/health-topics/drowning#tab=tab_1

Table 1: Selected notifiable diseases reported by Medical Officers of Health 27th- 02nd Sep 2022 (35th Week)

RDHS	Dengue Fever		Dysentery		Encephaliti		Enteric Fever		Food Poi-		Leptospirosis		Typhus		Viral Hepa-		Human		Chickenpox		Meningitis		Leishmania-		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	33	9414	0	4	0	3	0	1	0	6	1	133	0	0	0	3	0	2	0	30	0	10	0	2	15	95
Gampaha	46	5638	0	5	0	1	0	1	0	12	6	128	0	0	0	8	0	4	0	35	0	31	0	28	6	85
Kalutara	13	2997	0	20	0	1	0	1	0	6	1	284	0	4	0	3	0	2	0	55	0	19	0	2	30	51
Kandy	39	3760	1	18	0	0	0	3	6	11	2	120	2	29	0	8	0	0	1	54	0	7	0	19	13	98
Matale	25	825	1	8	0	0	0	0	0	0	0	76	0	4	0	5	0	1	1	31	0	1	9	258	18	98
NuwareEliya	8	183	1	19	0	0	0	3	3	5	2	62	0	12	0	6	0	0	2	33	2	5	0	0	27	94
Galle	68	2925	0	9	0	1	0	0	0	0	6	313	3	20	0	5	0	0	1	59	0	16	0	0	13	99
Hambantota	30	1303	1	28	0	0	0	0	2	2	3	189	0	32	0	6	0	0	1	22	3	12	5	362	15	99
Matara	37	1312	0	12	0	2	0	0	0	0	4	189	2	11	0	1	0	0	1	33	0	6	4	203	30	99
Jaffna	33	2511	2	48	0	2	0	58	0	30	0	20	3	413	0	6	0	4	3	84	1	11	0	0	65	93
Kilinochchi	1	102	1	7	0	0	0	1	0	24	0	11	0	9	0	0	0	0	0	4	0	2	0	2	28	99
Mannar	0	177	0	2	0	0	0	0	0	0	0	23	0	3	0	2	0	0	6	0	15	0	0	0	18	79
Vavuniya	0	70	0	3	0	1	0	2	0	0	0	16	0	1	0	0	0	0	27	0	0	0	0	4	1	96
Mullaitivu	1	52	0	4	0	0	0	2	0	6	0	25	0	5	0	0	0	0	6	0	1	0	1	0	22	92
Batticaloa	3	1019	2	50	0	7	0	0	0	20	0	36	0	0	0	1	0	1	1	25	0	29	0	1	38	99
Ampara	0	134	0	10	0	1	0	0	0	17	0	84	0	1	0	1	0	0	40	0	19	0	12	11	93	
Trincomalee	0	991	0	23	0	0	0	1	0	2	0	22	0	3	0	4	0	0	32	0	6	0	1	18	86	
Kurunegala	27	2140	0	18	0	2	0	0	4	4	4	120	0	24	0	1	0	1	2	67	0	29	7	346	9	95
Puttalam	17	1626	0	3	0	0	0	0	0	0	0	20	0	7	0	0	0	0	11	0	23	0	4	15	90	
Anuradhapur	4	330	0	8	0	2	0	1	0	5	0	129	0	19	0	2	0	1	3	49	1	34	2	280	10	84
Polonnaruwa	2	119	0	6	1	1	0	0	0	1	1	94	0	0	0	3	0	0	14	0	3	2	336	15	93	
Badulla	7	830	1	19	0	2	0	1	0	13	11	178	2	40	3	112	0	0	1	42	0	11	0	17	17	99
Monaragala	3	378	0	6	0	1	0	4	0	3	2	233	1	21	1	44	0	0	4	51	1	36	4	109	11	99
Ratnapura	6	2265	0	34	0	6	0	3	0	27	3	705	0	20	0	21	0	0	0	60	0	46	14	164	13	91
Kegalle	34	2220	0	12	0	8	0	1	0	8	5	380	0	17	1	7	0	0	2	79	0	38	0	17	9	98
Kalmune	24	864	1	28	0	1	0	1	0	6	0	20	0	1	0	1	0	0	2	48	1	32	3	3	30	100
SRI LANKA	46	44185	11	404	1	42	0	84	9	208	51	3610	13	696	5	250	0	16	26	997	9	442	50	2171	18	94

Source: Weekly Returns of Communicable Diseases (esurveillance.epid.gov.lk). T=Timeliness refers to returns received on or before 02nd Sep., 2022 Total number of reporting units 361 Number of reporting units data provided for the current week: 188 C**=Completeness

Table 2: Vaccine-Preventable Diseases & AFP

27th– 02th Sep 2022 (35th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2022	Number of cases during same week in 2021	Total number of cases to date in 2022	Total number of cases to date in 2021	Difference between the number of cases to date in 2022 & 2021
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	00	00	00	01	53	39	35.8 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	00	00	01	00	00	00	00	00	00	00	58	57	1.7 %
Measles	00	00	00	00	00	00	00	00	00	00	00	16	11	45.4 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	05	02	150 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	01	03	- 66.6 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	00	01	00	0 %
Tuberculosis	562	25	00	04	08	13	14	01	00	627	00	4737	3429	38.1 %

Key to Table 1 & 2

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.
 RDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

Data Sources:
 Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,
 Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis
 CRS** =Congenital Rubella Syndrome
 NA = Not Available

Covid-19 Prevention & Control

For everyone's health & safety, maintain physical distance, often wash hands, wear a face mask and stay home.

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@slt.net.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

ON STATE SERVICE

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