Drowning Data Brief

Maryland Child Fatality Review, 2010-2019

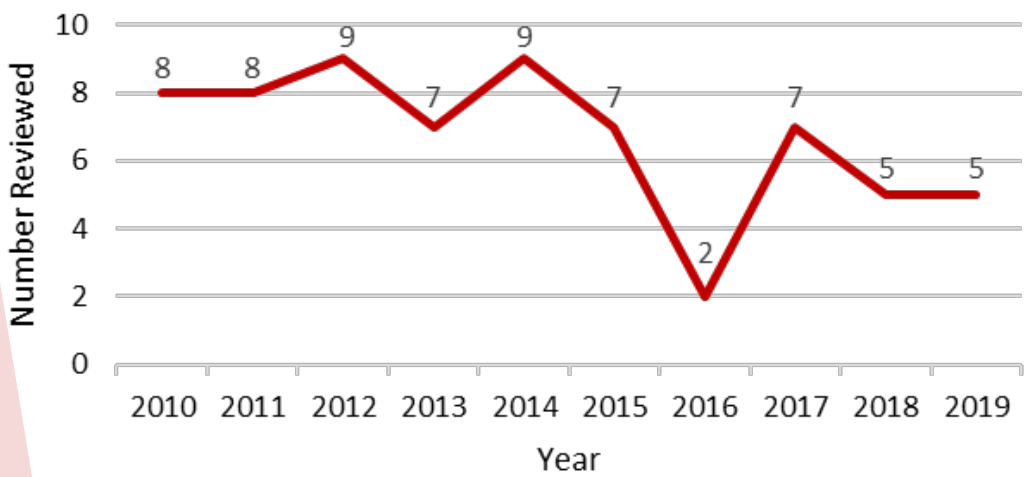
Introduction to Child Fatality Review

Child Fatality Review (CFR) is a systematic, multi-agency, and multi-disciplinary review of unexpected child deaths. The Maryland CFR Program was established by statute in Health General Article, § 5-702 4(b)(12) and Senate Bill 464 (Chapter 355 of the Acts of 1999) and is housed within the Maryland Department of Health (MDH). Local CFR teams operate in each Maryland jurisdiction and receive notice from the Office of the Chief Medical Examiner (OCME) of unexpected resident deaths of children under age 18. This report examines data related to 2010-2019 unexpected child deaths by drowning available as of January 2022. Only deaths which were reviewed by local teams were included in this analysis.

Child Fatalities by Drowning

Of all deaths caused by external injury, death by drowning was the fifth leading cause of death in Maryland during the ten-year period from 2010 to 2019; accounting for nearly 3% of all reviewed unexpected child deaths. There were 67 reviewed child deaths by drowning during this time period. The number of child deaths by drowning has been declining, with an average of 8 deaths reviewed per year between 2010-2014 down to 5 deaths reviewed per year between 2015-2019 (Figure 1).

Figure 1: Annual Number of Reviewed Child Fatalities by Drowning, Maryland, 2010-2019



Demographics of Child Fatalities by Drowning

Of the 67 deaths reviewed by drowning between 2010-2019, 38 were among Black non-Hispanic children and 26 were among White non-Hispanic children (Figure 2). Approximately 73% were among male children (Figure 3). Children of different age groups were victims of drowning during this time period, and there was no clear majority of which age group is most at risk (Figure 4).

Figure 2: Drowning Fatalities Reviewed by Race and Ethnicity, Maryland, 2010-2019

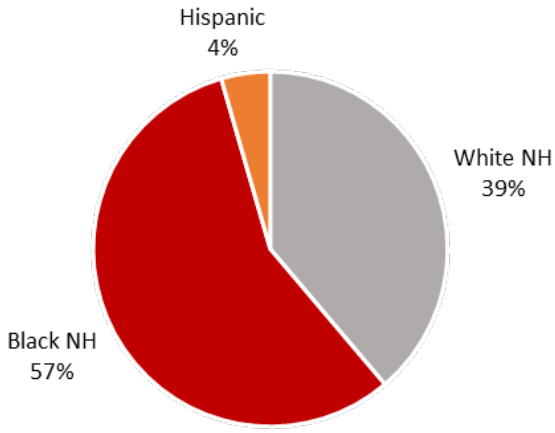


Figure 3: Drowning Fatalities Reviewed by Sex, Maryland, 2010-2019

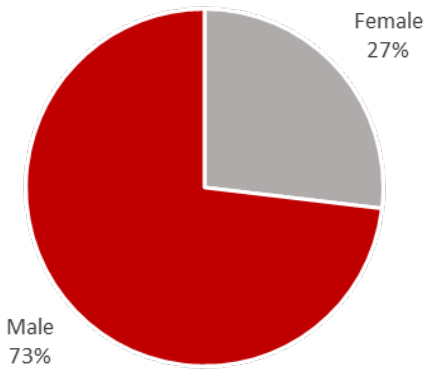
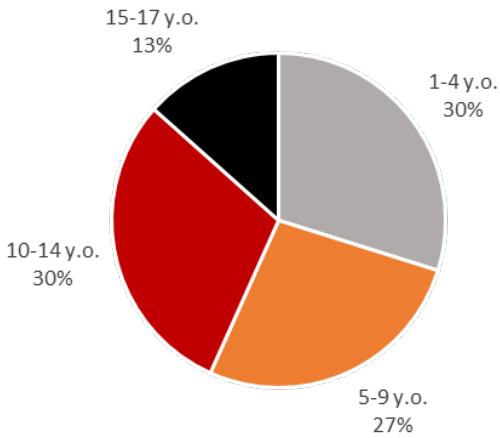


Figure 4: Drowning Fatalities Reviewed by Age Group, Maryland, 2010-2019



Child Fatalities by Jurisdiction

Table 1 shows the number of reviewed child fatalities by drowning by jurisdiction of residence. Anne Arundel had the highest number of reviewed child deaths by drowning during this time period at nine cases, followed by Baltimore City, Caroline County, and Montgomery County at eight deaths each.

Table 1: Drowning Fatalities Reviewed by Jurisdiction, Maryland, 2010-2019 (N=67)	
Anne Arundel	9
Baltimore City	8
Caroline	8
Montgomery	8
Baltimore	7
Prince George's	5
Frederick	4
Cecil	3
Washington	3
Wicomico	3
Charles	2
Harford	2
Queen Anne's	2
Dorchester	1
St. Mary's	1
Talbot	1
Allegany	0
Calvert	0
Carroll	0
Garrett	0
Howard	0
Kent	0
Somerset	0
Worcester	0

Incident Information

Table 2 shows the details regarding the circumstances surrounding the drowning deaths that were reviewed. Of the 67 drowning deaths reviewed, the majority occurred in a suburban area, in which the child could not swim, there was no warning sign or label posted, and there was no lifeguard present. In almost all of the cases reviewed, the drowning was marked as preventable.

Table 2: Drowning Fatalities Reviewed by Incident Information, Maryland, 2010-2019 (N=67)

	Number	Percent
Suburban area	42	62.7%
Rural area	15	22.4%
Urban area	10	14.9%
Child could not swim	33	49.3%
Child could swim	9	13.4%
Unspecified	25	37.3%
No warning sign or label posted	21	31.3%
Warning sign or label posted	13	19.4%
Unspecified	33	49.3%
No lifeguard present	31	46.3%
Lifeguard present	4	6.0%
Unspecified	32	47.8%
Death was preventable	58	86.6%
Death was not preventable	3	4.5%
Team could not determine	3	4.5%
Unspecified	3	4.5%

Among the 67 drowning deaths reviewed, drowning in open water or pool/ hot tub/spa made up approximately 73% of the deaths (Figure 5). Among the 67 drowning deaths reviewed, 57% of children were not supervised at the time of the drowning (Figure 6).

Figure 5: Drowning Fatalities Reviewed by Incident Location, Maryland, 2010-2019

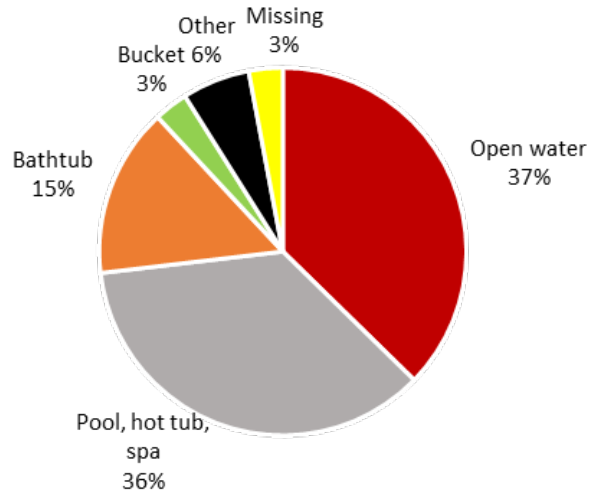
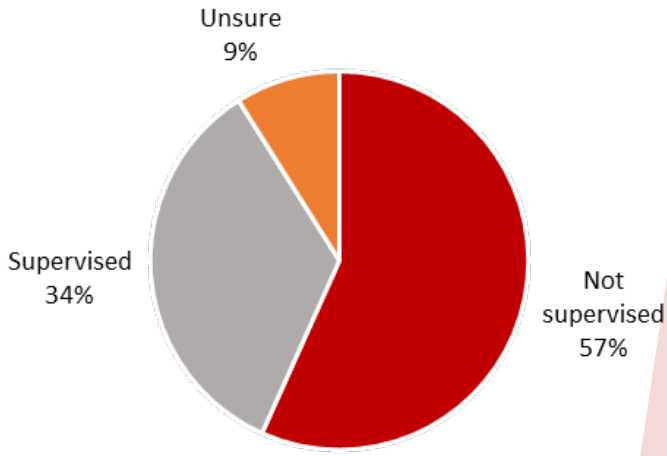


Figure 6: Drowning Fatalities Reviewed by Supervision, Maryland, 2010-2019



Child Protective Services (CPS)

Of the 67 drowning deaths reviewed, 37 cases had a CPS record check conducted and 13 cases had CPS action taken as a result of the drowning (Table 3).

Table 3: Drowning Fatalities Reviewed by CPS Information, Maryland, 2010-2019 (N=67)

CPS record check conducted	37
No CPS record check conducted	13
Unspecified	17
CPS action taken	13
No CPS action taken	37
Unspecified	17

Conclusions

Of all childhood deaths caused by external injury, death by drowning was the fifth leading cause of death in Maryland during the ten-year period from 2010 to 2019; accounting for nearly 3% of all reviewed unexpected child deaths. Of the 67 deaths reviewed by drowning between 2010-2019, 38 were among Black non-Hispanic children and 26 were among White non-Hispanic children. Approximately 73% were among male children.

Of the 67 drowning deaths reviewed, the majority occurred in a suburban area, in open water or pool/hot tub/spa, in which the child could not swim, there was no warning sign or label posted, there was no supervision, and there was no lifeguard present. In almost all of the cases reviewed, the drowning was marked as preventable. Anne Arundel had the highest number of reviewed child deaths by drowning during this time period at nine cases, followed by Baltimore City, Caroline County, and Montgomery County at eight deaths each. Of the 67 drowning deaths reviewed, 37 cases had a CPS record check conducted and 13 cases had CPS action taken as a result of the drowning.

Public health efforts should focus resources to reduce risks associated with drowning, which is a highly preventable cause of death. According to the CDC, more children ages 1-4 die from drowning than any of the preventable causes of death. Drowning happens in seconds and is often silent. Outreach should be targeted to educate the public about the risks associated with unsupervised swimming and enforce restrictions on children from entering water and/or require wearing a life jacket if they cannot swim no matter what age they are.

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Maryland
DEPARTMENT OF HEALTH

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