Childhood Drowning Deaths in Washington State

February 2007

Drowning Deaths of Washington Residents\textsuperscript{1}:

- In 2005, there were 104 unintentional drowning deaths of Washington residents of all ages; and 19 of those were children less than age 18.
- The most recent national data available are from 2004. From 2002-2004, the drowning death rate for Washington children ages 0-17 in 2005 was 1.4 per 100,000. Nationally, from 2002-2004, the drowning death rate for children was 1.3 per 100,000.


- Drowning is the \textsuperscript{2}nd leading cause of unintentional injury deaths for Washington children ages 0-17. Each year, drowning accounts for an average of 25 deaths, 30 hospitalizations for near-drowning events, and about 110 visits to the emergency room for Washington state residents ages 0-17.\textsuperscript{2}
- \textbf{Age-Specific Rates (2003-2005):} For children ages 0-17, accidental drowning rates are highest in the 1-4 age group (at 2.5 per 100,000 children ages 1-4).
- \textbf{Drowning Fatalities by Age/ Trends:} Drowning death rates for most age groups have generally shown a decrease from 1990 through 2004, based on three year rolling averages, but only the trend in the infant drowning rates appears to be significant.

Unintentional Drowning Rates by Age Group, WA Residents
3 year rolling averages, 1990-2005

\begin{table}[h!]
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<1 & \textcolor{red}{3.5} & \textcolor{red}{3.0} & \textcolor{red}{2.5} & \textcolor{red}{2.0} & \textcolor{red}{1.5} & \textcolor{red}{1.0} \\
1-4 & \textcolor{red}{2.5} & \textcolor{red}{2.0} & \textcolor{red}{1.5} & \textcolor{red}{1.0} & \textcolor{red}{0.5} & \textcolor{red}{0.0} \\
5-9 & \textcolor{red}{1.5} & \textcolor{red}{1.0} & \textcolor{red}{0.5} & \textcolor{red}{0.0} & \textcolor{red}{0.0} & \textcolor{red}{0.0} \\
10-14 & \textcolor{red}{1.0} & \textcolor{red}{0.5} & \textcolor{red}{0.0} & \textcolor{red}{0.0} & \textcolor{red}{0.0} & \textcolor{red}{0.0} \\
15-17 & \textcolor{red}{0.5} & \textcolor{red}{0.0} & \textcolor{red}{0.0} & \textcolor{red}{0.0} & \textcolor{red}{0.0} & \textcolor{red}{0.0} \\
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\end{tabular}
\end{table}

\textsuperscript{1} Source: Death certificate data, Washington State Department of Health Center for Health Statistics
\textsuperscript{2} Drowning is a death from a submersion event with and without involvement of a watercraft. Drowning hospitalization data are non-fatal hospitalizations after surviving such an event. Emergency department data are based on national estimates.

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Manner of Death: All of the drowning deaths of Washington children in 2005 were unintentional.

Gender: Males accounted for 63% of the drowning deaths for Washington children ages 0-17 in 2005. The drowning death rate for Washington male children in 2005 was 1.5 per 100,000 compared to 0.9 per 100,000 for females.

Key Findings from Child Death Review (CDR) Drowning Death Reviews:

Child Death Review (CDR) is a tool by which local communities identify circumstances leading to unexpected deaths; collect and report accurate, uniform information; improve interagency communication; and develop strategies to improve child health and safety. From 1999-2003, 29 community-based, multidisciplinary teams based in local health jurisdictions reviewed unexpected deaths of children age birth to 18 years residing in that jurisdiction.

CDR teams use a standardized data form and submit data to the state CDR database housed at the Washington State Department of Health. The CDR data form includes general information on the child and their family, as well as questions pertinent to particular types of deaths such as drowning and motor vehicle deaths. From 1999-2003, teams completed 1,400 reviews of unexpected deaths of Washington children.

For 1999-2003, of the 125 unintentional or undetermined manner drowning deaths that occurred to Washington residents ages 0-17, local teams completed reviews on 93 (74%) of those deaths. The following are some highlights from the 93 deaths reviewed.

Water Location Where Drowning Occurred:
- 73% of the deaths occurred in open water (such as a lake, river, pond, the sound, or a creek).
- 27% of the deaths occurred in the bathtub, hot tub, swimming pool or wading pool.

Activity at Time of Drowning:
- 27% were swimming
- 15% were playing in the water
- 23% were sitting or playing near the water
- 9% were in a bathtub
- 8% were boating
- 4% were on a raft or inner tube
- 2% drowned after falling through ice.
- Activity just prior to the drowning was unknown in 13% of the deaths

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3 CDR data presented here includes unknowns or missing data.
4 Excludes death where a motor vehicle crash was involved.
**Age Group and Location of Drowning:**
- Infants were more likely than other age groups to drown in a bathtub.
- About half of the children ages 1 – 4 years old drowned in open water. Most of the swimming pool deaths occurred in this age group.
- About 90% of the drowning deaths of older children and adolescents (ages 10-17) occurred in open water such as a lake, river, or pond.

**Of the 93 CDR Drowning Deaths reviewed:**
- Only 6 children were known to have had previous swimming lessons.
- Twenty-six children were reported to be able to swim.
- Of the 3 children were using a personal flotation device (1 was wearing a life jacket that did not fit and 2 were wearing a life jacket in rivers).
- Only one of the 7 children who were boating was wearing a personal flotation device.
- In 4 instances, a lifeguard was present: 1 at a swimming pool (at a school or city park) and 3 at lakes (1 at a state or county park and 2 at a school or city park).
- In 15 instances, warning signs were present.

**Pools:**
- Of the 17 pool, hot tub or wading pool drowning deaths, 13 (76%) occurred at private residences.
- Of those 13 pools at private residences, 2 had a locked gate. In both cases, there was a gap under the fence or between the gate and the fence that a child could squeeze through. For the remaining pools, 2 had a gate that was unlocked, 8 had no gate, and for 1 it was unknown whether there was a gate.

**Impairment due to Drugs/Alcohol:**
- Drugs or alcohol were involved in 9 of the deaths (10%). Either the team noted that impairment by the child or another person was a factor in the child’s drowning death or the child had a positive toxicology screen for alcohol or illicit drugs.
- For youth ages 15-17, alcohol or illicit drugs were involved in 5 (17%) of the deaths.

**Hour of Drowning:**
- 47% of the drowning deaths reviewed occurred between the hours of 3 and 7 pm (which could indicate the most common time for swimming or could indicate that the children are tired and more likely to drown as a result).
**Drowning Deaths by Month of Occurrence:**
This chart shows the number of drowning deaths by the month in which they occurred. Most drowning deaths (71%) occurred between May and August.

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**Supervision:**
- For the 31 drowning deaths ages 0-4 in the CDR database, at least 3 were supervised by another child age 11 or younger. Two others were supervised by other non-adults.

**Preventability:**
- CDR teams concluded that 85% of these drowning deaths were preventable. A preventable death is defined as one where a reasonable intervention could have prevented the death from occurring, such as a personal flotation device, lifeguards, appropriate supervision.

**Committee Conclusions:**
- Teams cited neglect as a factor in 21 of the 31 deaths (68%) of children less than age 5; the team generally noted these were isolated acts of neglect due to inadequate supervision rather than a pattern of neglect.

**Related Data:**

This chart illustrates the percentages of students who reported always wearing a life vest when in a small boat such as a canoe, raft, or motorboat. Half of the Grade 8 students, 33 percent of the Grade 10 students, and 28 percent of the Grade 12 students reported always wearing a life vest when boating. There was a significant increase from 2002 to 2004 in the percentage of Grade 8 students who reported this behavior.

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**Source:** Healthy Youth Survey. Percentages represent students who reported always wearing a life vest when in a small boat such as a canoe, raft, or small motorboat. These percentages are based on the number of students who indicated that they had been boating.

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5 Healthy Youth Survey Analytic Report. Available at: https://fortress.wa.gov/doh/hys/

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