



Children's
Safety
Network

Costs of Leading Childhood Injuries



The burden of injuries in children and adolescents ages 0 to 19 in the U.S. is reflected in the costs of fatalities, hospitalizations*, and emergency department (ED) visits. In 2015, childhood injuries contributed to

- \$111.6 billion in fatalities
- \$119.9 billion in hospitalizations
- \$305.5 billion in ED visits.

Motor vehicle traffic, homicide/assault, suicide/self-harm, drowning, poisoning, fire/burn, falls, and struck by/against are the leading causes of injuries in children and adolescents. Together, these injuries represent 61% of all injury-related fatality costs (\$68.0 billion), 80% of all injury-related hospitalization costs (\$96.3 billion), and 79% of all injury-related ED visit costs (\$240.2 billion). These estimates are based on injury data from the Centers for Disease Control and Prevention (CDC) and unit costs from the Pacific Institute for Research and Evaluation's (PIRE) widely cited injury cost model.

Injury costs include medical costs, work loss costs, and quality of life loss costs.

Medical costs include emergency medical services, physician, hospital rehabilitation, prescription, and related treatment costs, including ancillary costs for crutches, physical therapy, and coroner/medical examiner expenses in the case of fatalities.

Work loss costs include victims' lost wages and the value of lost household work. In the case of fatalities, work loss costs include the value of earnings and household work over the victim's expected remaining lifespan in the absence of premature death.

Quality of life loss costs are the monetary value of pain, suffering, disfigurement, and lost capacity to function physically, including lost sensory, mobility, and cognitive functioning, as well as ability to work and to perform activities of daily living. This measure excludes work losses to avoid double-counting.

This fact sheet provides injury rates from 2011 to 2015 and a breakdown of 2015 injury costs for the following injuries:

- Child passenger
- Teen driver and passenger
- Homicide/assault
- Suicide/self-harm
- Drowning
- Poisoning
- Fire/burn
- Falls
- Struck by/against

*Hospitalization data do not include transferred cases reported in WISQARS

Note: If hospitalized medical costs were computed using the 2014 Healthcare Cost and Utilization Project National Inpatient Sample rather than 2015 NEISS data, the costs would rise slightly from \$6.6 billion to \$7 billion (in 2015 dollars).

Child Passenger

In 2015, 299 children and adolescents aged 0-14 died of unintentional motor vehicle traffic injuries, and there were an additional 4,797 hospitalizations and 157,157 ED visits related to unintentional motor vehicle traffic injuries in the U.S.

The table below shows the rates of child passenger-related fatalities, hospitalizations, and ED visits from 2011 to 2015.

	Rate per 100,000					Percent Change
	2011	2012	2013	2014	2015	
Fatalities	0.65	0.59	0.51	0.46	0.49	-24.6%
Hospitalizations	10.31	9.78	7.16	6.22	7.86	-23.8%
ED Visits	282.84	270.07	254.95	239.05	257.56	-8.9%

The table below includes the societal costs of child passenger related fatalities, hospitalizations, ED visits in the U.S. in 2015.

	Medical Costs (in million)	Work Loss Costs (in million)	Quality of Life Loss Costs (in billion)	Combined Costs (in billion)
Fatalities	\$3.53	\$456.36	\$2.04	\$2.50
Hospitalizations	\$287.19	\$566.40	\$3.92	\$4.78
ED Visits	\$364.62	\$346.63	\$3.39	\$4.10

Note: Costs are in 2015 dollars.

Data Sources: CDC WISQARS, 2017; NCHS Multiple Cause of Death Data, 2015

Teen Driver and Passenger

In 2015, 700 teens aged 15-19 died of unintentional motor vehicle traffic injuries, and there were an additional 17,411 hospitalizations and 239,768 ED visits related to unintentional motor vehicle traffic injuries in the U.S.

The table below shows the rates of teen driver-related fatalities, hospitalizations, ED visits in the U.S. from 2011 to 2015.

	Rate per 100,000					Percent Change
	2011	2012	2013	2014	2015	
Fatalities	5.10	4.37	3.61	3.55	3.49	-31.6%
Hospitalizations	78.33	83.07	79.95	64.90	82.48	5.3%
ED Visits	1,245.71	1,253.83	1,130.64	1,068.45	1,135.86	-8.8%

The table below includes the societal costs of teen driver and passenger-related fatalities, hospitalizations, and ED visits in the U.S. in 2015.

	Medical Costs (in million)	Work Loss Costs (in million)	Quality of Life Loss Costs (in billion)	Combined Costs (in billion)
Fatalities	\$6.41	\$1,313.13	\$4.51	\$5.83
Hospitalizations	\$1,129.38	\$2,666.76	\$12.92	\$16.71
ED Visits	\$597.33	\$465.22	\$5.65	\$6.71

Note: Costs are in 2015 dollars.

Data Sources: CDC WISQARS, 2017; NCHS Multiple Cause of Death Data, 2015

Homicide/Assault

In 2015, 2,537 children and adolescents aged 0-19 died of homicide, and there were an additional 15,531 hospitalizations and 265,444 ED visits related to assault injuries in the U.S.

The table below shows the rates of homicide/assault-related fatalities, hospitalizations, and ED visits in the U.S. from 2011 to 2015.

	Rate per 100,000					Percent Change
	2011	2012	2013	2014	2015	
Fatalities	3.25	3.15	2.85	2.81	3.10	-4.6%
Hospitalizations	20.84	18.14	18.22	17.02	18.91	-9.3%
ED Visits	462.93	405.32	370.02	335.93	323.22	-30.2%

The table below includes the societal costs of homicide/assault-related fatalities, hospitalizations, and ED visits in the U.S. in 2015.

	Medical Costs (in million)	Work Loss Costs (in million)	Quality of Life Loss Costs (in billion)	Combined Costs (in billion)
Fatalities	\$40.36	\$4,533.54	\$16.67	\$21.24
Hospitalizations	\$718.76	\$1,929.36	\$13.33	\$15.98
ED Visits	\$677.02	\$760.18	\$15.48	\$16.91

Note: Costs are in 2015 dollars.

Data Sources: CDC WISQARS, 2017; NCHS Multiple Cause of Death Data, 2015

Suicide/Self-Harm

In 2015, 2,474 children and adolescents aged 10-19 died of suicide, and there were an additional 35,274 hospitalizations and 42,071 ED visits related to self-harm injuries in the U.S.

The table below shows the rates of suicide/self-harm-related fatalities, hospitalizations, and ED visits in the U.S. from 2011 to 2015.

	Rate per 100,000					Percent Change
	2011	2012	2013	2014	2015	
Fatalities	4.92	4.98	5.11	5.41	5.93	20.5%
Hospitalizations	64.97	58.97	73.65	75.78	84.53	30.1%
ED Visits	89.60	95.82	103.59	101.98	100.81	12.5%

The table below includes the societal costs of suicide/self-harm-related fatalities, hospitalization, ED visits in the U.S. in 2015.

	Medical Costs (in million)	Work Loss Costs (in million)	Quality of Life Loss Costs (in billion)	Combined Costs (in billion)
Fatalities	\$15.91	\$4,684.49	\$15.96	\$20.66
Hospitalizations	\$456.00	\$707.10	\$2.56	\$3.72
ED Visits	\$101.86	\$30.96	\$1.99	\$2.13

Note: Costs are in 2015 dollars.

Data Sources: CDC WISQARS, 2017; NCHS Multiple Cause of Death Data, 2015

Drowning

In 2015, 882 children and adolescents aged 0-19 died of unintentional drowning, and there were an additional 878 hospitalizations and 4,016 ED visits related to unintentional drowning injuries in the U.S.

The table below shows the rates of drowning-related fatalities, hospitalizations, and ED visits in the U.S. from 2011 to 2015.

	Rate per 100,000					Percent Change
	2011	2012	2013	2014	2015	
Fatalities	1.21	1.22	1.09	1.14	1.08	-10.7%
Hospitalizations	1.78	1.51	1.92	2.75	1.07	-39.9%
ED Visits	3.49	3.05	2.39	5.92	4.89	40.1%

The table below includes the societal costs of drowning-related fatalities, hospitalizations, and ED visits in the U.S. in 2015.

	Medical Costs (in million)	Work Loss Costs (in million)	Quality of Life Loss Costs (in billion)	Combined Costs (in billion)
Fatalities	\$6.65	\$1,757.18	\$5.64	\$7.40
Hospitalizations	\$52.82	\$247.56	\$1.13	\$1.43
ED Visits	\$9.14	\$5.04	\$0.09	\$0.10

Note: Costs are in 2015 dollars.

Data Sources: CDC WISQARS, 2017; NCHS Multiple Cause of Death Data, 2015

Poisoning

In 2015, 782 children and adolescents aged 0-19 died of unintentional poisoning, and there were an additional 12,309 hospitalizations and 105,632 ED visits related to unintentional poisoning in the U.S.

The table below shows the rates of poisoning-related fatalities, hospitalizations, and ED visits in the U.S. from 2011 to 2015.

	Rate per 100,000					Percent Change
	2011	2012	2013	2014	2015	
Fatalities	1.05	0.86	0.83	0.80	0.97	-7.6%
Hospitalizations	15.89	14.41	13.95	12.48	14.99	-5.7%
ED Visits	124.07	118.07	114.32	116.09	128.62	3.7%

The table below includes the societal costs of poisoning-related fatalities, hospitalizations, and ED visits in the U.S. in 2015.

	Medical Costs (in million)	Work Loss Costs (in million)	Quality of Life Loss Costs (in billion)	Combined Costs (in billion)
Fatalities	\$6.24	\$1,461.23	\$5.05	\$6.52
Hospitalizations	\$110.51	\$24.88	\$0.07	\$0.20
ED Visits	\$226.21	\$17.31	\$9.35	\$9.60

Note: Costs are in 2015 dollars.

Data Sources: CDC WISQARS, 2017; NCHS Multiple Cause of Death Data, 2015

Fire/Burn

In 2015, 263 children and adolescents aged 0-19 died of unintentional fire/burn injuries, and there were an additional 9,483 hospitalizations* and 106,507 ED visits related to unintentional fire/burn injuries in the U.S.

The table below shows the rates of fire/burn-related fatalities, hospitalizations, and ED visits in the U.S. from 2011 to 2015.

	Rate per 100,000					Percent Change
	2011	2012	2013	2014	2015	
Fatalities	0.39	0.32	0.41	0.36	0.32	-17.9%
Hospitalizations*	11.95	10.83	13.24	12.06	11.55	-3.4%
ED Visits	150.46	151.66	138.02	130.51	129.69	-13.8%

The table below includes the societal costs of fire/burn-related fatalities, hospitalizations, and ED visits in the U.S. in 2015.

	Medical Costs (in million)	Work Loss Costs (in million)	Quality of Life Loss Costs (in billion)	Combined Costs (in billion)
Fatalities	\$2.61	\$395.17	\$1.80	\$2.19
Hospitalizations	\$249.93	\$335.53	\$3.11	\$3.70
ED Visits	\$210.45	\$427.40	\$2.74	\$3.38

Note: Costs are in 2015 dollars.

Data Sources: CDC WISQARS, 2017; NCHS Multiple Cause of Death Data, 2015

* The injury hospitalization count includes burn patients treated in the ED and transferred, since these patients typically are transferred to a burn center and admitted.

Falls

In 2015, 123 children and adolescents aged 0-19 died of unintentional fall injuries, and there were an additional 44,608 hospitalizations and 2,343,983 ED visits related to unintentional fall injuries in the U.S.

The table below shows the rates of fall-related fatalities, hospitalizations, and ED visits in the U.S. from 2011 to 2015.

	Rate per 100,000					Percent Change
	2011	2012	2013	2014	2015	
Fatalities	0.17	0.16	0.15	0.14	0.15	-11.8%
Hospitalizations	58.44	60.70	58.31	51.56	54.32	-7.0%
ED Visits	3,336.84	3,253.28	2,986.79	2,966.67	2,854.14	-14.5%

The table below includes the societal costs of fall-related fatalities, hospitalizations, and ED visits in the U.S. in 2015.

	Medical Costs (in million)	Work Loss Costs (in million)	Quality of Life Loss Costs (in billion)	Combined Costs (in billion)
Fatalities	\$2.90	\$215.72	\$0.81	\$1.03
Hospitalizations	\$1,145.30	\$4,605.63	\$33.93	\$39.68
ED Visits	\$6,334.03	\$10,321.08	\$95.82	\$112.48

Note: Costs are in 2015 dollars.

Data Sources: CDC WISQARS, 2017; NCHS Multiple Cause of Death Data, 2015

Struck By/Against

In 2015, unintentional struck by/against injuries caused 75 deaths in children and adolescents aged 0-19, and there were an additional 13,951 hospitalizations and 1,658,554 ED visits related to injuries from unintentional struck by/against in the U.S.

The table below shows the rates of struck by/against-related fatalities, hospitalizations, and ED visits in the U.S. from 2011 to 2015.

	Rate per 100,000					Percent Change
	2011	2012	2013	2014	2015	
Fatalities	0.11	0.12	0.10	0.11	0.09	-18.2%
Hospitalizations	18.78	18.87	17.67	18.38	16.99	-9.5%
ED Visits	2,450.34	2,427.47	2,204.18	2,100.16	2,019.53	-17.6%

The table below includes the societal costs of struck by/against-related fatalities, hospitalizations, and ED visits in the U.S. in 2015.

	Medical Costs (in million)	Work Loss Costs (in million)	Quality of Life Loss Costs (in billion)	Combined Costs (in billion)
Fatalities	\$1.43	\$117.05	\$0.51	\$0.63
Hospitalizations	\$375.05	\$1,617.66	\$10.12	\$12.11
ED Visits	\$3,942.24	\$6,034.65	\$74.87	\$84.84

Note: Costs are in 2015 dollars.

Data Sources: CDC WISQARS, 2017; NCHS Multiple Cause of Death Data, 2015



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