



Reducing Injury-Related Hospital Admissions among Children and Adolescents Ages 0-19
The Role of the New Title V MCH Block Grant National Performance Measure on Injury

January 14th, 2015

Meeting Orientation Slide

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Understanding the burden of injury-related hospitalizations in the U.S.

Rebecca Spicer, PhD, MPH
Director, CSN Economic & Data Analysis Resource Center
Pacific Institute for Research & Evaluation
January 14, 2015

The Burden

- More children and adolescents ages 1-19 die from injuries and violence than all diseases combined (MCOD, 2010).
- Every year nearly 320,000 hospitalizations are due to injury to 0 to 19 year-olds (HCUP NIS, 2010)

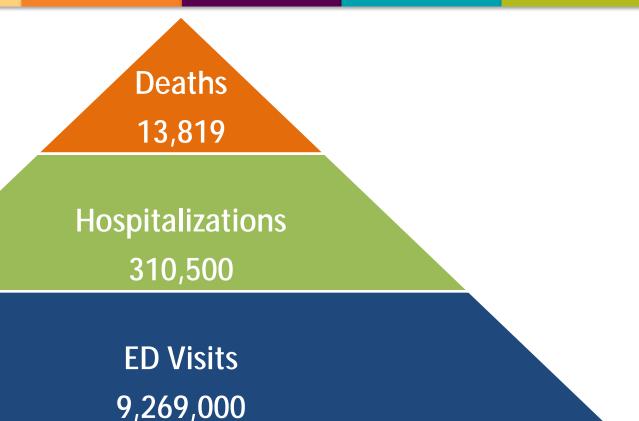
10 Leading Causes of Death by Age Group, United States - 2012

	Age Groups										
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	Total
1	Congenital Anomalies 4,939	Unintentional Injury 1,353	Unintentional Injury 743	Unintentional Injury 807	Unintentional Injury 11,908	Unintentional Injury 15,851	Unintentional Injury 15,034	Malignant Neoplasms 48,028	Malignant Neoplasms 113,130	Heart Disease 477,840	Heart Disease 599,711
2	Short Gestation 4,202	Congenital Anomalies 501	Malignant Neoplasms 440	Malignant Neoplasms 472	Suicide 4,872	Suicide 6,216	Malignant Neoplasms 11,337	Heart Disease 35,265	Heart Disease 71,228	Malignant Neoplasms 403,497	Malignant Neoplasms 582,623
3	SIDS 1,679	Malignant Neoplasms 392	Congenital Anomalies 167	Suicide 306	Homicide 4,614	Homicide 4,342	Heart Disease 10,489	Unintentional Injury 20,394	Unintentional Injury 15,822	Chronic Low. Respiratory Disease 122,375	Chronic Low. Respiratory Disease 143,489
4	Maternal Pregnancy Comp. 1,507	Homicide 339	Homicide 138	Homicide 173	Malignant Neoplasms 1,574	Malignant Neoplasms 3,674	Suicide 6,758	Liver Disease 8,877	Chronic Low. Respiratory Disease 15,212	Cerebro- vascular 109,127	Cerebro- vascular 128,546
5	Unintentional Injury 1,169	Heart Disease 154	Heart Disease 67	Congenital Anomalies 160	Heart Disease 956	Heart Disease 3,231	Homicide 2,705	Suicide 8,862	Diabetes Mellitus 12,553	Alzheimer's Disease 82,690	Unintentional Injury 127,792
6	Placenta Cord. Membranes 1,018	Influenza & Pneumonia 93	Chronic Low. Respiratory Disease 63	Heart Disease 108	Congenital Anomalies 423	HIV 652	Liver Disease 2,469	Diabetes Mellitus 5,747	Cerebro- vascular 11,230	Diabetes Mellitus 52,881	Alzheimer's Disease 83,637
7	Bacterial Sepsis 566	Septicemia 62	Benign Neoplasms 47	Chronic Low Respiratory Disease 56	Diabetes Mellitus 196	Diabetes Mellitus 646	Diabetes Mellitus 1,867	Cerebro- vascular 5,654	Cerebro- vascular 11,070	Unintentional Injury 44,698	Diabetes Mellitus 73,932
8	Respiratory Distress 504	Cerebro- vascular 56	Influenza & Pneumonia 44	Cerebro- vascular 51	Cerebro- vascular 183	Liver Disease 597	Cerebro- vascular 1,730	Chronic Low. Respiratory Disease 4,533	Suicide 6,929	Influenza & Pneumonia 43,355	Influenza & Pneumonia 50,636
9	Circulatory System Disease 492	Benign Neoplasms 55	Cerebro- vascular 34	Influenza & Pneumonia 41	Complicated Pregnancy 169	Cerebro- vascular 535	HIV 1,345	HIV 2,582	Septicemia 4,982	Nephritis 37,740	Nephritis 45,622
10	Neonatal Hemorrhage 422	Chronic Low Respiratory Disease 51	Septicemia 26	Benign Neoplasms 40	Influenza & Pneumonia 147	Congenital Anomalies 401	Septicemia 757	Septicemia 2,340	Nephritis 4,765	Septicemia 27,022	Suicide 40,600

Data Source: National Vital Statistics System, National Center for Health Statistics, CDC. Produced by: National Center for Injury Prevention and Control, CDC using WISQARS™.

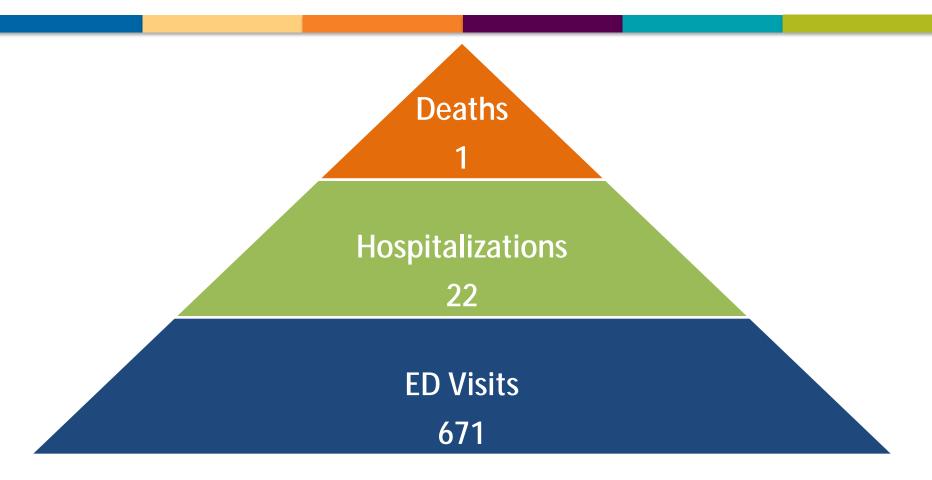


The Injury Pyramid for Ages 0-19, 2010



Source: CDC WISQARS query

The Injury Pyramid for Ages 0-19, 2010



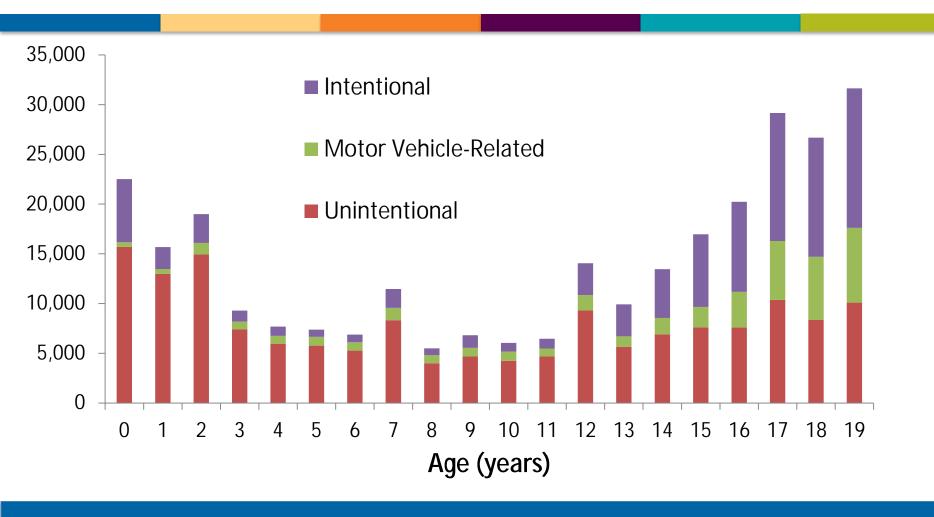
Incidence of Leading Causes of Fatal Injury, United States, 2010

Age Groups							
Rank	<1	1 - 4	5 - 9	10 - 14	15-19		
1	SUID 3,610	Drowning 436	MVT 354	MVT 452	MVT 7,024		
2	Homicide Unspecified 203	MVT 343	Drowning 134	Suicide Suffocation 168	Homicide Firearm 3,889		
3	MVT 79	Homicide Unspecified 163	Fire/Burn 89	Drowning 117	Poisoning 3,183		
4	Drowning 39	Fire/Burn 151	Homicide Firearm 58	Homicide Firearm 107	Suicide Firearm 2,046		
5	Suffocation Undetermined 39	Suffocation 134	Suffocation 31	Suicide Firearm 80	Suicide Suffocation 1,824		

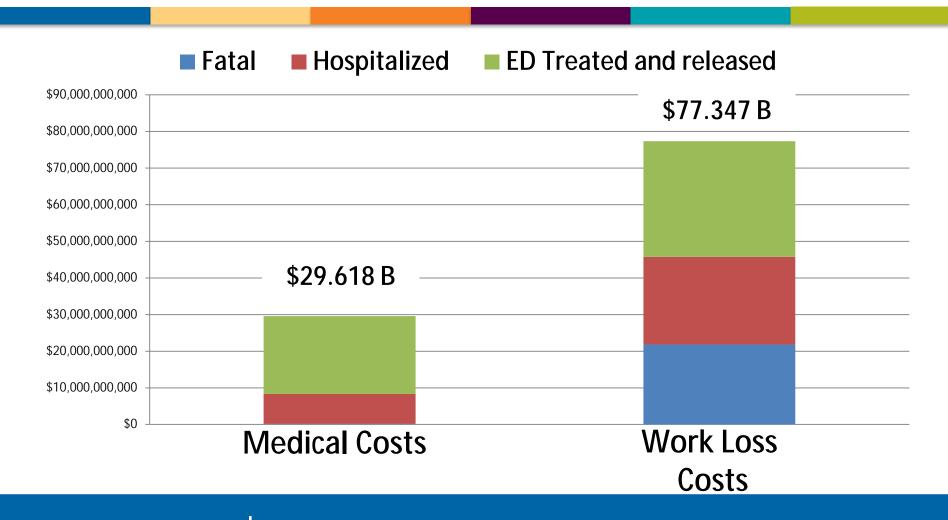
Incidence of Leading Causes of Hospitalized Injury, United States, 2010

Age Groups							
Rank	<1	1 - 4	5 - 9	10 - 14	15-19		
1	Fall 5,171	Fall 12,794	Fall 12,168	Fall 9,977	Self-Inflicted 27,094		
2	Unspecified 2,724	Poisoning 6,646	Other Unspecified 3,825	Self-inflicted 6,263	MVT Occupant 18,469		
3	Other Unspecified 2,710	Hot Object/Subst. 5,190	MVT Occupant 2,425	Other Unspecified 4,570	Assault 13,877		
4	Assault 2,591	Other Unspecified 4,315	Struck by/ Against 2,360	Struck by/ Against 4,364	Fall 11,947		
5	Other Specified Classifiable 2,029	Bites/Stings 3,455	Bites/Stings 2,009	Other Transport 3,280	Other Unspecified 10,167		

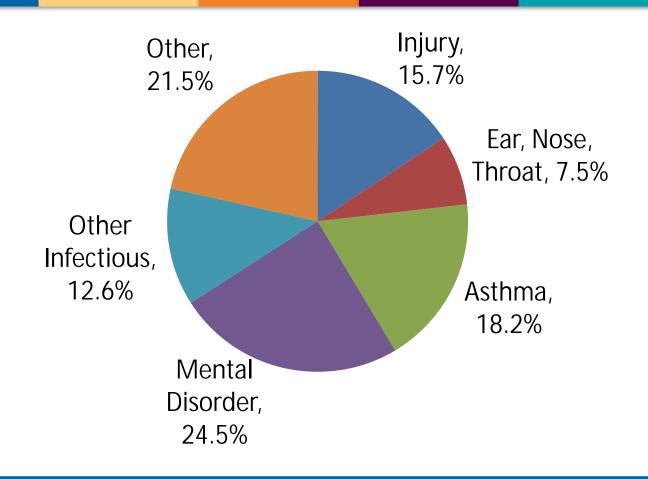
Distribution of Hospital Admitted Injuries by Age



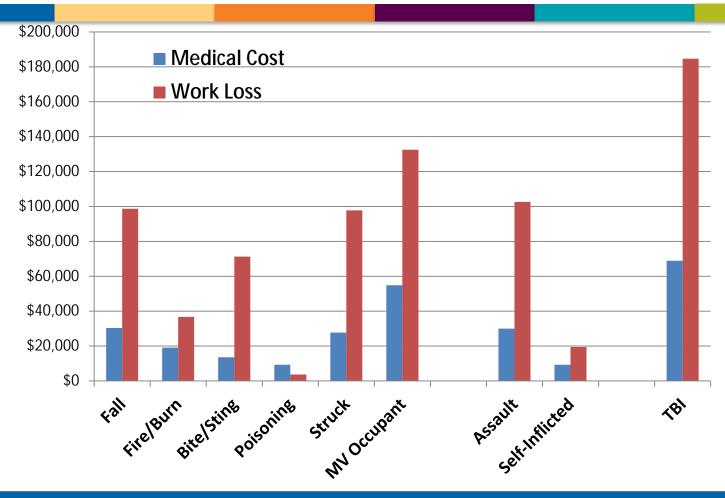
Estimated Cost of Injuries, Ages 0-19, 2010



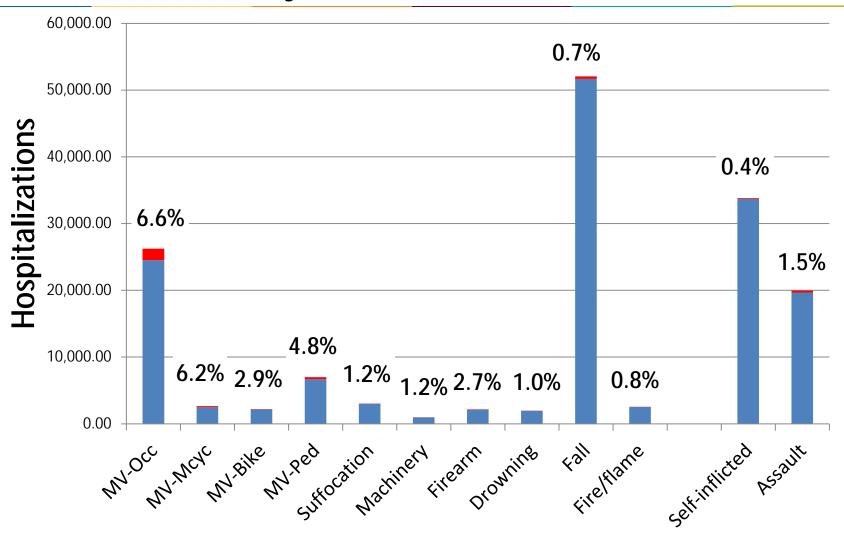
% of Medical Spending by Condition, Ages 0-19, United States, 2008



Average Cost per Hospitalized Injury, for Selected Causes, Ages 0-19

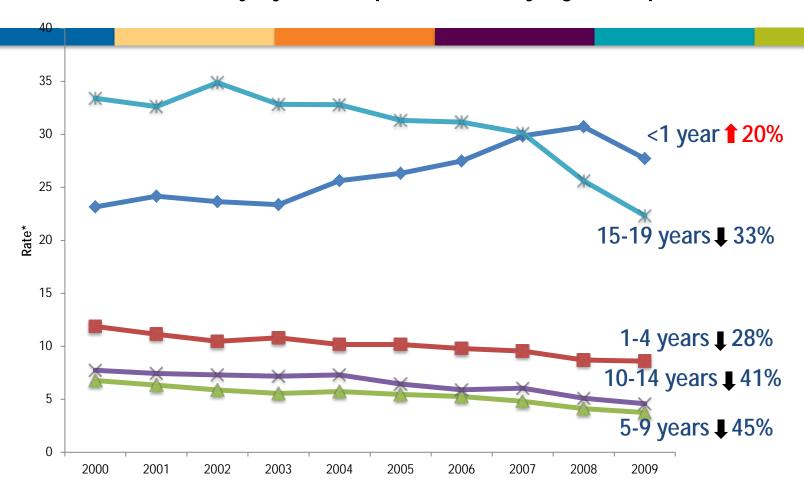


Number of Hospitalized Injuries and % Transferred to a Rehabilitation Hospital, by Selected Causes

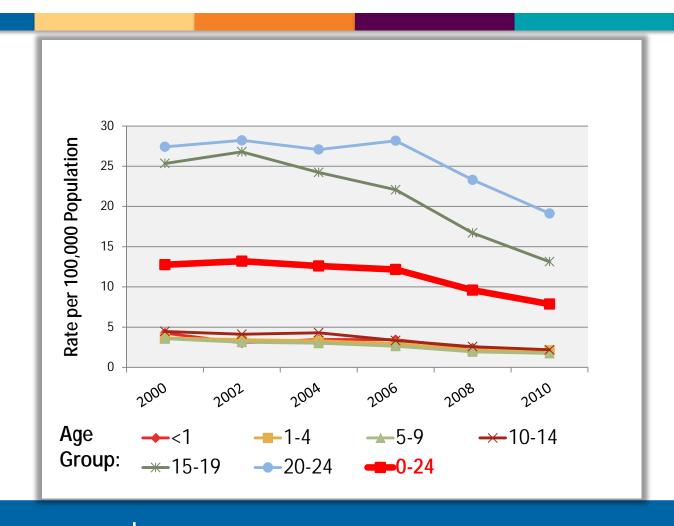


Injuries are Preventable

Unintentional Injury Deaths per 100,000 by Age Group, 2000-2009



Motor Vehicle Crash Fatality Rates per 100,000, 2000-2010



Leading Products by Age Group, Ranked by Non-Fatal Injury Cost

1995-1996

	Age Group						
Rank	<1	1-4	5-9	10-14	15-19		
1	Stairs	Stairs	Bicycles	Bicycles	Basketball		
(or steps	or steps	14%	13%	15%		
	15%	8%					
2	Beds (not	Beds	Monkey bars	Basketball	Football		
	cribs)	7%	6%	11%	11%		
	11%						
3	Floors	Floors	Swings	Football	Dicycles		
	9%	6%	4%	9%	(incl. moun-		
					tain)		
					6%		
4	Baby	Tables	Beds	Baseball	Baseball		
	walkers	6%	4%	& softball	& softball 5%		
	6%			6%			
5	Tables	Doors	Doors	In-line/	Stairs		
	5%	5%	4%	rollerskating	or steps		
				5%	4%		

2009-2010

			Age Group		
Rank	<1	1-4	5-9	10-14	15-19
1	Beds & bedding	Beds & bedding	Bicycles	Football	Football
	22.2%	9.1%	7.7%	14.3%	12.8%
2	F!cors	Floors	Monkey bars	Bicycles	Basketball
	13.8%	7.2%	6.8%	8.4%	11.3%
3	Sofas	Stairs	Beds & bedding	Basketball	Bicycles
	6.6%	7.1%	4.6%	8.3%	4.8%
1	Stairs	Tables	Floors	Soccer	Soccer
-(6.0%	5.1%	4.0%	4.9%	4.7%
5	Car seats	Chairs	Football	Baseball /softball	Stairs
	5.1%	4.6%	3.4%	4.7%	4.5%

Selected Cost-Benefit Analyses

Every Dollar Spent On	Saves Society (in 2013 dollars)
Childproof Cigarette Lighter	\$77
Booster Seat	\$71
Bicycle Helmet	\$48
Child Safety Seat	\$42
Zero Alcohol Tolerance, Driver Under 21	\$25
Smoke Alarm	\$17
Pediatrician Counseling	\$9
Poison Control Center	\$8

Children's Safety Network, Injury Prevention: What Works? A summary of cost outcome analysis for injury prevention programs (2013 update).

Source: Children's Safety Network,

Injury Prevention: What Works?

A summary of cost outcome analysis for injury prevention programs (2014 update).



Contact Information

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New Title V MCH Block Grant National Performance Measure #7: Injury-Related Hospitalization

Ashley Hirai, PhD

U.S. Department of Health and Human Services
Health Resources and Services Administration
Maternal and Child Health Bureau
Office of Epidemiology and Research





Title V MCH Block Grant

- Enacted as Title V of Social Security Act in 1935, converted to Block Grant in 1981
- Largest source of public health funding for MCH broadly, including women, infants, children, youth, CSHCN, and families
- Federal-State partnership where states must match \$3 of every \$4 federal dollars
- In 2013, Title V served nearly 42 million pregnant women, infants, children, CSHCN





Triple Aim of Title V Transformation

1. Reduce burden

Streamline annual report and application; reducing # forms Needs assessment summary (20 pages) integrated into application

Reducing data reporting by pre-populating from federal sources

2. Maintain flexibility

Choosing 8 of 15 national performance measures across 6 population domains

State-specific performance measures

State-developed evidence-based/informed strategy measures

3. Improve accountability and document impact

Fewer performance measures directly tied to Title V activities New framework to track performance in relation to activities Revamped Title V information system





Title V Measurement Framework

ESMs

Evidence-based
Strategy
Measures



NPMs

National
Performance
Measures



NOMs

National
Outcome
Measures

Activities/Strategies



Short, Medium Term Outcomes



Long Term
Outcomes





Performance Measure Domains

- Women's / Maternal Health
- Perinatal / Infant Health
- Child Health
- Adolescent Health
- Children with Special Health Care Needs
- Cross-cutting / Life Course





Child Health Measures

6. Developmental Screening

 Developmental screening using a parent-completed screening tool among children ages 10-71 months with a past year health care visit (%)
 Data Source: NSCH

7. Injury Hospitalization

Injury-related hospital admissions per 100,000 children ages 0-9
 Data Source: HCUP-SID

8. Physical Activity

 60+ minutes of physical activity per day among children ages 6-11 (%)
 Data Source: NSCH





Adolescent Health Measures

7. Injury Hospitalization

Injury-related hospital admissions per 100,000 children ages
 10-19 Data Source: HCUP-SID

8. Physical Activity

60+ minutes of physical activity per day among children ages
 12-17 (%) Data Source: NSCH, YRBSS

9. Bullying

 Adolescents ages 12-17 who sometimes/usually/often bully or are bullied (%) Data Source: NSCH, YRBSS

10. Adolescent Well Visit

Past-year preventive visit among adolescents ages 12-17 (%)





NPM-7 Details

Goal: To reduce hospital admissions for non-fatal injury among children ages 0-9 and 10-19 years

Numerator: Number of hospital admissions among children ages 0-9 and 10-19 years with a primary diagnosis of unintentional or intentional injury (excludes in-hospital deaths)

Denominator: Number of children and adolescents ages 0-9 and 10-19 years (Census)

Unit: Rate per 100,000

Data Source: HCUP-State Inpatient Databases (AHRQ)

To be provided overall by state and year and within state by sex, age, race/ethnicity, payor, rural/urban where possible for current year





Framework

 Evidencebased/informed strategy measures

> mprovements in practice lead to improvements in performance

Improvements in performance lead to improvements in outcomes

 Injury-related hospitalizations per 100,000

- Child mortality rate
- · Adolescent mortality rate
- Adolescent Motor Vehicle mortality rate
- · Adolescent suicide rate

Ultimate Outcomes





Timeline

Action	Month, Year
TVIS data entry in EHB	April, 2015
Needs assessment and selection of 8 NPMs due	July 15, 2015
Revamped TVIS public web reports	January, 2016
ESMs and 3-5 SPMs due with FY2017 application	July 15, 2016





Resources

MCH Block Grant Transformation

<u> http://mchb.hrsa.gov/blockgrant/</u>

MCH Library evidence briefs

<u> http://www.mchlibrary.org/evidence/</u>

Children's Safety Network

http://www.childrenssafetynetwork.org/









Resources Designed to Support States Selecting MCH National Performance Measure 7: Injury-Related Hospitalization, Ages 0-19

Erin Reiney, MPH, CHES

Maternal and Child Health Bureau





Resources to Support NPM-7

- Children's Safety Network Program
 - History
 - Next Project Period: July 1, 2015- June 30, 2018
 - Three Components of Activity
 - National Coordinated Child Safety Initiative
 - Child Safety Collaborative Innovation and Improvement Network (COIIN)
 - Child Safety Promotion Capacity Building





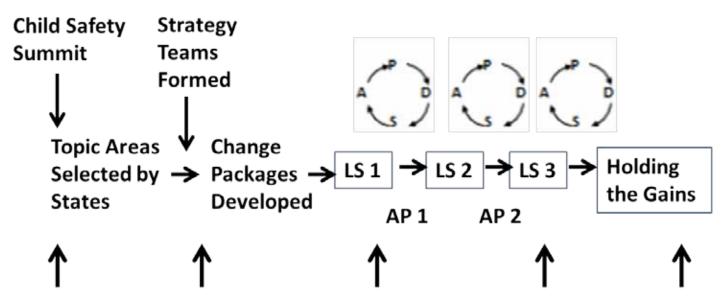
What is a COIIN?

- State-to-state network infrastructure
- Key elements
 - Coordinated Strategies
 - Collaborative Learning
 - Common Benchmarks
 - Rapid Test Cycles





Child Safety CollN 12-18 Months Lifespan



Expert Support from Child Safety Campaign Steering Committee

Source: Adapted from IHI, BTS Collaborative.

LS- Learning Session
AP- Action Period





Example CollN Strategy Team: Bullying Prevention

Potential Improvement: Increase the frequency that pediatricians screen for bullying during a visit in accordance with Bright Futures health supervision guidelines.

Sample Metrics

- Proportion of providers receiving bullying screening training and tools via the state American Academy of Pediatrics chapter.
- Proportion of pediatric practices in target communities which agree to integrate bullying screening as a standard of practice.
- Number of youth-at-risk identified through screening and connected to support resources.





Example CollN Strategy Team: Motor Vehicle Crash Injuries

Potential Improvement: Increase the proportion of families served through Women Infants and Children (WIC) programs which use properly-installed and height/weight-appropriate child safety seats.

Sample Metrics

- Increase knowledge among WIC Program leadership on the risk of motor vehicle crash injuries to its client population.
- Increase proportion of local child safety seat distribution programs which have established a service MOU with their local WIC providers.
- Increase the proportion of families screened and referred for child safety seat installation resources.





Contact Info

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CSN STATE HOSPITALIZATION FACT SHEETS:

An Overview

Paul R. Jones, PhD Children's Safety Network Economics and Data Analysis Resource Center (CSN-EDARC)

CSN STATE HOSPITALIZATION FACT SHEETS



Maryland, 2011: Incidence and Rates (per 100,000) of Hospital-Admitted Injuries by Intent, Mechanism, and Age

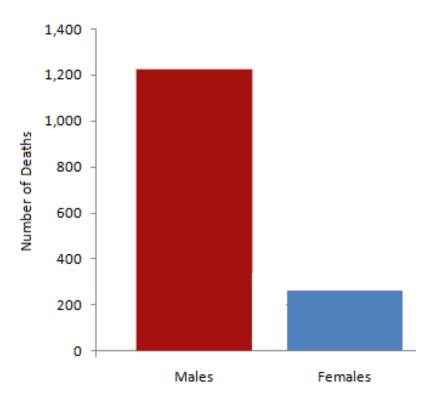
CSN Children's Safety Network
National Injury and Violence Prevention Resource Center

Incidence and Rates (per 100,000) of Hospital-Admitted Injuries by Intent, Mechanism, and Age Maryland, 2011

	Age <	1 Yrs	Age 1	- 4 Yrs	Age 5	-9 Yrs	Age 10	-14 Yrs	Age 15	-19 Yrs	Age 20	-24 Yrs	Ages <1	- 24 Yrs
Intent/Mechanism	Injuries	Rate	Injuries	Rate	Injuries	Rate	Injuries	Rate	Injuries	Rate	Injuries	Rate	Injuries	Rate
Total Incidence	199	273.6	383	130.6	298	81.4	455	120.1	1,558	388.6	2,346	582.1	5,239	273.6
Unintentional	173	237.9	364	124.2	280	76.5	358	94.5	872	217.5	1,314	326.0	3,361	175.5
Cut/Pierce	****	6.9	****	1.7	****	0.8	13	3.4	28	7.0	28	6.9	82	4.3
Drowning	****	1.4	****	1.0	****	1.6	****	8.0	****	1.5	****	0.5	21	1.1
Fall	36	49.5	102	34.8	121	33.0	102	26.9	151	37.7	251	62.3	763	39.8
Fire/Burn	****	9.6	36	12.3	****	2.7	11	2.9	25	6.2	32	7.9	121	6.3
Fire/Flame	****	1.4	****	0.7	****	0.3	****	0.8	12	3.0	****	2.0	27	1.4
Hot Object/Substance	****	8.2		11.6	****	2.5	****	2.1	13	3.2		6.0	94	4.9
Firearm	0	0.0	****	0.3	0	0.0	****	0.8	17	4.2	22	5.5	43	2.2
Machinery	0	0.0	0	0.0	****	0.3	0	0.0	****	0.5	****	1.7	****	0.5
Motor Vehicle Traffic	****	5.5		9.6	42	11.5	53	14.0	328	81.8	496	123.1	951	49.7
Occupant	****	2.7	16	5.5	12	3.3	20	5.3	220	54.9	362	89.8	632	33.0
Motorcyclist	0	0.0	0	0.0	***	0.3	****	0.8	38	9.5	58	14.4	100	5.2
Pedal Cyclist	0	0.0	0	0.0	****	1.1	****	1.3	****	2.2		3.2	31	1.6
Pedestrian	****	2.7	12	4.1	25	6.8	25	6.6	58	14.5	33	8.2	155	8.1
Unspecified	0	0.0	0	0.0	0	0.0	0	0.0	****	0.7	25	6.2		1.5
Other	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	****	1.2	****	0.3
Pedal Cyclist, Other	0	0.0	****	1.0	****	2.2	15	4.0	12	3.0	18	4.5	56	2.9
Pedestrian, Other	0	0.0	****	0.7	0	0.0	****	0.3	0	0.0	****	0.5	****	0.3
Transport, Other	0	0.0	****	0.7	****	1.1	18	4.8	32	8.0	42	10.4	98	5.1
Bites and Stings	****	1.4	39	13.3		5.5	24	6.3	23	5.7	44	10.9	151	7.9
Other Natural/Environmental	****	11.0	****	1.7	****	0.5	****	1.1	12	3.0	13	3.2	44	2.3
Overexertion	****	5.5	****	0.7	****	0.3	****	2.1	15	3.7	****	2.5	40	2.1
Poisoning	****	13.7	52	17.7		3.0	12	3.2	69	17.2	172	42.7	326	17.0
Struck By/Against	****	6.9	15	5.1		3.3	53	14.0	90	22.4	52	12.9	227	11.9
Suffocation	11	15.1	11	3.8	****	0.8	****	0.5	****	0.5	****	0.7	32	1.7
Other	81	111.4	58	19.8	36	9.8	36	9.5	60	15.0	120	29.8	391	20.4
Self-Inflicted	0	0.0	0	0.0	****	0.3		15.1	388	96.8	527	130.8	973	50.8
Cut/Pierce	0	0.0	0	0.0	0	0.0	23	6.1	93	23.2	114	28.3	230	12.0
Firearm	0	0.0	0	0.0	0	0.0	0	0.0	****	0.2	****	0.5	****	0.2
Poisoning	0	0.0	0	0.0	0	0.0	31	8.2	267	66.6	379	94.0	677	35.4
Suffocation	0	0.0	0	0.0	0	0.0	****	0.8	****	2.5	****	2.0		1.1
Other	0	0.0	0	0.0	****	0.3	0	0.0		4.2	24	6.0	42	2.2
Assault	****	12.4	11	3.8	****	8.0	17	4.5	207	51.6	370	91.8	617	32.2
Cut/Pierce	0	0.0	0	0.0	0	0.0	2222	0.5		15.5	118	29.3	182	9.5
Firearm	0	0.0	****	0.3	0	0.0	****	0.3	51	12.7	72	17.9	125	6.5
Struck By/Against	****	1.4	****	0.7	0	0.0	****	2.6	68	17.0	123	30.5	204	10.7
Other	****	11.0	****	2.7	****	0.8	****	1.1		6.5	57	14.1	106	5.5
Undetermined	2333	2.7	2232	1.4	***	0.5	***	0.3	28	7.0	72	17.9	109	5.7
Poisoning	0	0.0	****	0.7	****	0.3	****	0.3		5.7	61	15.1	88	4.6
Other	****	2.7	****	0.7	****	0.3	0	0.0	****	1.2	11	2.7	21	1.1
Legal/Military	0	0.0	0	0.0	0	0.0	0	0.0	****	0.7	****	1.7	****	0.5
Unspecified	15	20.6	****	1.4		3.3	22	5.8	60	15.0	56	13.9	169	8.8

TEEN SUICIDES & NONFATAL SELF-INFLICTED ATTEMPTS

FIGURE 1 Number of Teen Suicide Injury Deaths in 2003 Aged 15-19 years

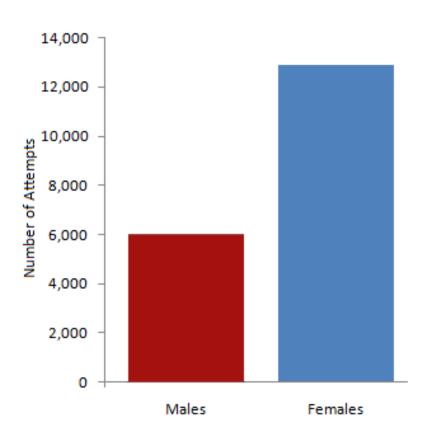


Source: CDC WISQARS

TEEN SUICIDES & NONFATAL SELF-INFLICTED ATTEMPTS

FIGURE 2
Number of Nonfatal Hospitalized Self-Inflicted Attempts in 2003

Aged 15-19 years



Source: HCUP SID

CSN STATE HOSPITALIZATION FACT SHEETS



Maryland, 2011: Incidence and Rates (per 100,000) of Hospital-Admitted Injuries by Intent, Mechanism, and Age

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National Injury and Violence Prevention Resource Center

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Total Incidence	199	273.6	383	130.6	298	81.4	455	120.1	1,558	388.6	2,346	582.1	5,239	273.6
Unintentional	173	237.9	364	124.2	280	76.5	358	94.5	872	217.5	1,314	326.0	3,361	175.5
Cut/Pierce	****	6.9	****	1.7	****	0.8	13	3.4	28	7.0	28	6.9	82	4.3
Drowning	****	1.4	****	1.0	****	1.6	****	8.0	****	1.5	****	0.5	21	1.1
Fall	36	49.5	102	34.8	121	33.0	102	26.9	151	37.7	251	62.3	763	39.8
Fire/Burn	****	9.6	36	12.3	****	2.7	11	2.9	25	6.2	32	7.9	121	6.3
Fire/Flame	****	1.4	****	0.7	****	0.3	****	0.8	12	3.0	****	2.0	27	1.4
Hot Object/Substance	****	8.2		11.6	****	2.5	****	2.1	13	3.2		6.0	94	4.9
Firearm	0	0.0	****	0.3	0	0.0	****	0.8	17	4.2	22	5.5	43	2.2
Machinery	0	0.0	0	0.0	****	0.3	0	0.0	****	0.5	****	1.7	****	0.5
Motor Vehicle Traffic	****	5.5		9.6	42	11.5	53	14.0	328	81.8	496	123.1	951	49.7
Occupant	****	2.7	16	5.5	12	3.3	20	5.3	220	54.9	362	89.8	632	33.0
Motorcyclist	0	0.0	0	0.0	***	0.3	****	0.8	38	9.5	58	14.4	100	5.2
Pedal Cyclist	0	0.0	0	0.0	****	1.1	****	1.3	****	2.2		3.2	31	1.6
Pedestrian	****	2.7	12	4.1	25	6.8	25	6.6	58	14.5	33	8.2	155	8.1
Unspecified	0	0.0	0	0.0	0	0.0	0	0.0	****	0.7	25	6.2		1.5
Other	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	****	1.2	****	0.3
Pedal Cyclist, Other	0	0.0	****	1.0	****	2.2	15	4.0	12	3.0	18	4.5	56	2.9
Pedestrian, Other	0	0.0	****	0.7	0	0.0	****	0.3	0	0.0	****	0.5	****	0.3
Transport, Other	0	0.0	****	0.7	****	1.1	18	4.8	32	8.0	42	10.4	98	5.1
Bites and Stings	****	1.4	39	13.3		5.5	24	6.3	23	5.7	44	10.9	151	7.9
Other Natural/Environmental	****	11.0	****	1.7	****	0.5	****	1.1	12	3.0	13	3.2	44	2.3
Overexertion	****	5.5	****	0.7	****	0.3	****	2.1	15	3.7	****	2.5	40	2.1
Poisoning	****	13.7	52	17.7		3.0	12	3.2	69	17.2	172	42.7	326	17.0
Struck By/Against	****	6.9	15	5.1		3.3	53	14.0	90	22.4	52	12.9	227	11.9
Suffocation	11	15.1	11	3.8	****	0.8	****	0.5	****	0.5	****	0.7	32	1.7
Other	81	111.4	58	19.8	36	9.8	36	9.5	60	15.0	120	29.8	391	20.4
Self-Inflicted	0	0.0	0	0.0	****	0.3		15.1	388	96.8	527	130.8	973	50.8
Cut/Pierce	0	0.0	0	0.0	0	0.0	23	6.1	93	23.2	114	28.3	230	12.0
Firearm	0	0.0	0	0.0	0	0.0	0	0.0	****	0.2	****	0.5	****	0.2
Poisoning	0	0.0	0	0.0	0	0.0	31	8.2	267	66.6	379	94.0	677	35.4
Suffocation	0	0.0	0	0.0	0	0.0	****	0.8	****	2.5	****	2.0		1.1
Other	0	0.0	0	0.0	****	0.3	0	0.0		4.2	24	6.0	42	2.2
Assault	****	12.4	11	3.8	****	8.0	17	4.5	207	51.6	370	91.8	617	32.2
Cut/Pierce	0	0.0	0	0.0	0	0.0	2222	0.5		15.5	118	29.3	182	9.5
Firearm	0	0.0	****	0.3	0	0.0	****	0.3	51	12.7	72	17.9	125	6.5
Struck By/Against	****	1.4	****	0.7	0	0.0	****	2.6	68	17.0	123	30.5	204	10.7
Other	****	11.0	****	2.7	****	0.8	****	1.1		6.5	57	14.1	106	5.5
Undetermined	2333	2.7	2232	1.4	***	0.5	***	0.3	28	7.0	72	17.9	109	5.7
Poisoning	0	0.0	****	0.7	****	0.3	****	0.3		5.7	61	15.1	88	4.6
Other	****	2.7	****	0.7	****	0.3	0	0.0	****	1.2	11	2.7	21	1.1
Legal/Military	0	0.0	0	0.0	0	0.0	0	0.0	****	0.7	****	1.7	****	0.5
Unspecified	15	20.6	****	1.4		3.3	22	5.8	60	15.0	56	13.9	169	8.8

TOP 5 CAUSES OF INJURY HOSPITALIZATIONS

Major Causes of Hospital-Admitted Injuries

These results are preliminary.

Table 3: Leading Causes and Annual Incidence of Hospital-Admitted Injuries by Age Group, Maryland Residents, 2011

Age Groups										
Rank	<1	1 - 4	5 - 9	10	- 14	15-19	20-24			
1	Other Specified, NEC 81	Fall 102	Fall 121		Fall 102	Self-Inflicted 388	Self-Inflicted 527			
2	Fall 36	Other Specified, NEC 58	MVT 42		Inflicted 57	MVT 328	MVT 496			
3	Unspecified 15	Poisoning 52	Other Specified, NEC 36	MVT 53	Struck By/ Against 53	Assault 207	Assault 370			
4	Suffocation 11	Bites & Stings 39	Bites & Stings 20	Other Specified, NEC 36		Fall 151	Fall 251			
5	Poisoning *	Fire/Burn 36	Struck By/ Against 12	Bites & Stings 24		Struck By/ Against 90	Poisoning 172			

Note: MVT = Motor Vehicle Traffic. NEC = Not Elsewhere Classifiable. Each listed mechanism is unintentional except those otherwise noted. * = indicates that the cell value ranges from 1 - 10 and is suppressed for data confidentiality purposes. Source: Children's Safety Network Economics and Data Analysis Resource Center (CSN EDARC), at Pacific Institute for Research and Evaluation (PIRE), Calverton, MD, January 2014. Incidence based on 2011 data from the state and obtained from the Maryland State Inpatient Databases (SID), Healthcare Cost and Utilization Project (HCUP), Agency for Healthcare Research and Quality (AHRQ), and the Maryland Health Services Cost Review Commission (Baltimore, MD). These injuries exclude patients who were dead at the time of discharge, readmission cases, transfers (e.g., from another short or long-term care facility, different acute care hospital), medical misadventures, and/or who suffered non-acute injuries. All counts were based on the patients' state of residence.

FINDING THE CSN STATE INJURY FACT SHEETS



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Click on the state name below to access the state fact sheets and cost-data by states.



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Arizona	Iowa	Nevada	South Dakota
Arkansas	Kansas	New Hampshire	Tennessee
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Colorado	Louisiana	New Mexico	Utah
Connecticut	Maine	New York	Vermont
Delaware	Maryland	North Carolina	Virginia

Montana

State Profiles Spotlight on the States United States Alabama Alaska Arizona Arkansas California Colorado Connecticut injuries. Delaware District of Columbia Florida Georgia Hawaii Idaho Illinois Indiana Iowa Kansas Kentucky Louisiana Maine Maryland Massachusetts Michigan Minnesota Mississippi Missouri Montana Nebraska Nevada New Hampshire New Jersey New Mexico New York North Carolina North Dakota Ohio Oklahoma Oregon Pennsylvania Puerto Rico Rhode Island South Carolina South Dakota Tennessee Texas Utah Vermont Virginia Washington and Age

Maryland 🔼 SHARE 📑 😭 ಶ ...) On this state page you will find links to CSN's state fact sheets that provide a state snapshot of data on the injury-related Maternal and Child Health Block Grant National Performance Measures and Health Status Indicators, articles that highlight injury prevention work in this state, state-specific report plans and data, and state contact information. Please email csninfo@edc.org if you have a resource specific to this state that you'd like us to share. The Children's Safety Network (CSN) National Injury and Violence Prevention Resource Center, funded by the Maternal and Child Health (MCH) Bureau, works with states to utilize a science-based, public health approach for injury and violence prevention (IVP). CSN is available to provide information and technical assistance on injury surveillance and data; needs assessments; best practices; and the design, implementation, and evaluation of programs to prevent child and adolescent State Contacts MCH Director: Ilise Marrazzo, ilise.marrazzo@maryland.gov IVP Director: Joyce Dantzler, joyce.dantzler@maryland.gov PRAMS Coordinator: Laurie Kettinger, laurie.kettinger@maryland.gov EMSC Director: Cynthia Wright-Johnson, cwright@miemss.org CDR Coordinator: Joan Patterson, joan.patterson@maryland.gov State Fact Sheets Maryland 2014 State Fact Sheet Maryland 2013 State Fact Sheet Maryland 2012 State Fact Sheet State Highlights View all State Highlights 2013 Statistics Show Increase in Fatal Overdoses among Pregnant Women, New Mothers DHMH Reaching Out to Providers to Refer Patients at Risk to Treatment | Maryland DHMH Public Health Model Reduces Violence, Says Baltimore Health Commissioner Maryland: Baseline Concussion Testing Starts in County | Gazette.net Maryland's Ban on Sale of Crib Bumper Pads Takes Effect Maryland: Cyberbullying at Montgomery Schools Raises Alarm State News View all news articles New Maryland State Police Video Encourages Enforcement of Driver-Cyclist Laws | Washington Post Dec 19, 2013 Maryland: New Parking Lot Safety Campaign Unveiled: Behind the Wheel or On Foot it's "Heads Up!" in Lots and Garages Dec 12, 2013 Facebook and Maryland Schools Partner to Combat Bullying | The Baltimore Sun Oct 10, 2013 State Specific Reports and Data Maryland, 2009: Incidence and Rates (per 100,000) of Hospital-Admitted Injuries by Intent, Mechanism,



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Maryland, 2011: Incidence and Rates (per 100,000) of Hospital-Admitted Injuries by Intent, Mechanism, and Age

CSNChildren's Safety Network

Incidence and Rates (per 100,000) of Hospital-Admitted Injuries by Intent, Mechanism, and Age Maryland, 2011

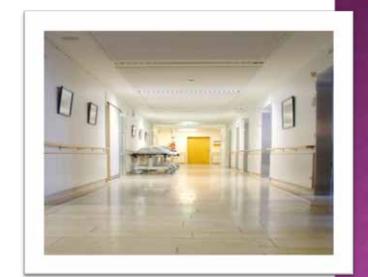
	Age <	1 Yrs	Age 1	. 4 Yrs	Age 5	.9 Yrs	Age 10	-14 Yrs	Age 15-19 Yrs		Age 20	.24 Yrs	Ages <1	- 24 Yrs
Intent/Mechanism	Injuries	Rate	Injuries	Rate	Injuries	Rate	Injuries	Rate	Injuries	Rate	Injuries	Rate	Injuries	Rate
Total Incidence	199	273.6	383	130.6	298	81.4	455	120.1	1,558	388.6	2,346	582.1	5,239	273.6
Unintentional	173	237.9	364	124.2	280	76.5	358	94.5	872	217.5	1,314	326.0	3,361	175.5
Cut/Pierce	****	6.9	****	1.7	****	0.8	13	3.4	28	7.0	28	6.9	82	4.3
Drowning	****	1.4	****	1.0	****	1.6	****	0.8	****	1.5	****	0.5	21	1.1
Fall	36	49.5	102	34.8	121	33.0	102	26.9	151	37.7	251	62.3	763	39.8
Fire/Burn	****	9.6	36	12.3	****	2.7	11	2.9	25	6.2	32	7.9	121	6.3
Fire/Flame	****	1.4	****	0.7	2222	0.3	****	0.8	12	3.0	2222	2.0	27	1.4
Hot Object/Substance	****	8.2		11.6	2222	2.5	****	2.1	13	3.2		6.0	94	4.9
Firearm	0	0.0	****	0.3	0	0.0	****	0.8	17	4.2	22	5.5	43	2.2
Machinery	ا ا	0.0	0	0.0	****	0.3	0	0.0	****	0.5	****	1.7	****	0.5
Motor Vehicle Traffic	****	5.5		9.6	42	11.5	53	14.0	328	81.8	496	123.1	951	49.7
Occupant	****	2.7	16	5.5	12	3.3	20	5.3	220	54.9	362	89.8	632	33.0
Motorcyclist	0	0.0	0	0.0	****	0.3	****	0.8	38	9.5	58	14.4	100	5.2
Pedal Cyclist	0	0.0	o	0.0	****	1.1	****	1.3	****	2.2	-	3.2	31	1.6
Pedestrian	****	2.7	12	4.1	25	6.8	25	6.6	58	14.5	33	8.2	155	8.1
Unspecified	0	0.0	0	0.0	0	0.0	0	0.0	****	0.7	25	6.2	,,,,	1.5
Other	ا	0.0	o	0.0	o	0.0	ő	0.0	0	0.0	****	1.2	****	0.3
Pedal Cyclist, Other	0	0.0	****	1.0	****	2.2	15	4.0	12	3.0	18	4.5	56	2.9
Pedestrian, Other	۱	0.0	****	0.7	0	0.0	****	0.3	0	0.0	****	0.5	****	0.3
Transport, Other	١ ٥	0.0	****	0.7	****	1.1	18	4.8	32	8.0	42	10.4	98	5.1
Bites and Stings	****	1.4	39	13.3		5.5	24	6.3	23	5.7	44	10.4	151	7.9
Other Natural/Environmental	****	11.0	****	1.7	****	0.5	24	1.1	12	3.0	13	3.2	44	2.3
Overexertion	****	5.5	****	0.7	****	0.3	****	2.1	15	3.7	****	2.5	40	2.1
Poisoning	****	13.7	52	17.7		3.0	12	3.2	69	17.2	172	42.7	326	17.0
Struck By/Against	****	6.9	15	5.1		3.3	53	14.0	90	22.4	52	12.9	227	11.9
Suffocation	11	15.1	11	3.8	****	0.8	****	0.5	****	0.5	****	0.7	32	1.7
Other	81	111.4	58	19.8	36	9.8	36	9.5	60	15.0	120	29.8	391	20.4
Self-Inflicted	0	0.0	0	0.0	30	0.3	30	15.1	388	96.8	527	130.8	973	50.8
Cut/Pierce	١	0.0	0	0.0	0	0.0	23	6.1	93	23.2	114	28.3	230	12.0
Firearm	"	0.0	ŏ	0.0	0	0.0	0	0.0	****	0.2	****	0.5	230	0.2
Poisoning	١ ٥	0.0	o	0.0	0	0.0	31	8.2	267	66.6	379	94.0	677	35.4
Suffocation	١ ،	0.0	0	0.0	0	0.0	21	0.2	207	2.5	3/9	2.0	6//	1.1
Other	١	0.0	0	0.0	****	0.0	0	0.0		4.2	24	6.0	42	2.2
Assault	****	12.4	11	3.8	****	0.8	17	4.5	207	51.6	370	91.8	617	32.2
Cut/Pierce	0	0.0	0	0.0	0	0.0	17	0.5	201	15.5	118	29.3	182	9.5
Firearm	١ ٥	0.0	****	0.0	0	0.0	****	0.3	51	12.7	72	17.9	125	6.5
	****		****		0		****		68		123		204	10.7
Struck By/Against Other	****	1.4 11.0	****	0.7 2.7	****	0.0	****	2.6	00	17.0 6.5	123 57	30.5	106	5.5
	****	2.7	****	1.4	****	0.5	****	1.1 0.3	28	7.0	72	14.1 17.9	100	5.7
Undetermined	0	0.0	****	0.7	****	0.5	****		28	7.0 5.7	61		109	4.6
Poisoning			****		****			0.3	****			15.1		-
Other		2.7		0.7		0.3	0	0.0	****	1.2	11	2.7	21	1.1
Legal/Military	0	0.0	0	0.0	0	0.0 3.3	22	0.0 5.8		0.7		1.7		0.5
Unspecified	15	20.6		1.4		3.3	22	5.8	60	15.0	56	13.9	169	8.8

Source: Children's Safety Network Economics and Data Analysis Resource Center (CSN EDARC), at Pacific Institute for Research and Evaluation (PIRE), Calverton, MD, February 2014. Incidence based on 2011 data from the state and obtained from the Maryland State Inpatient Databases (SID), Healthcare Cost and Utilization Project (HCUP), Agency for Healthcare Research and Quality (AHRQ), and the Maryland Health Services Cost Review Commission (Baltimore, MD). These injuries exclude patients who were dead at the time of discharge, readmission cases, transfers (e.g., from another short or long-term care facility, different acute care hospital), medical misadventures, and/or who suffered non-acute injuries. All counts were based on the patients' state of residence. Population statistics (Ages <1 - 24 years): United States Department of Health and Human Services (US DHHS), Centers for Disease Control and Prevention (CDC),

DATA SOURCE



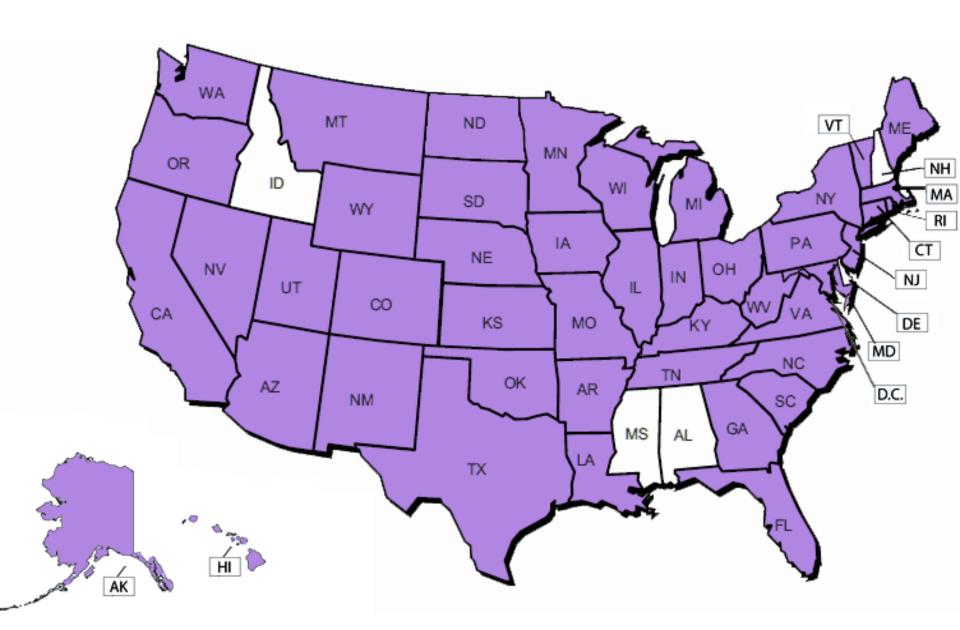
State Inpatient Databases (SID)





Z Agency for Healthcare Research and Quality (AHRQ)

STATES PROVIDING 2011 HCUP SID DATA*



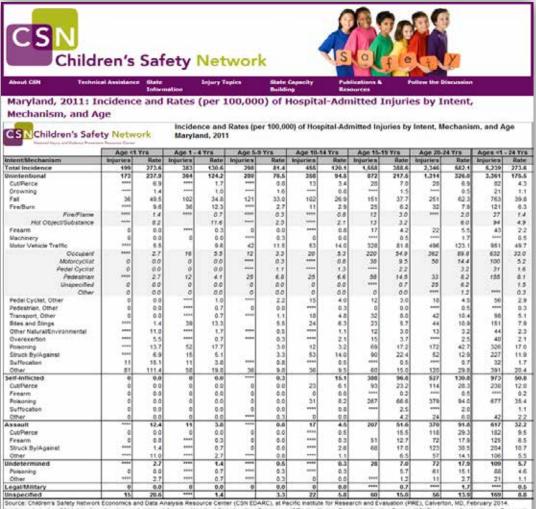
FACT SHEET FEATURES

Injury-related hospitalization:

- Incidence
- Rates (per 100,000)

Broken out by:

- Age Group
- Intent
- Mechanism



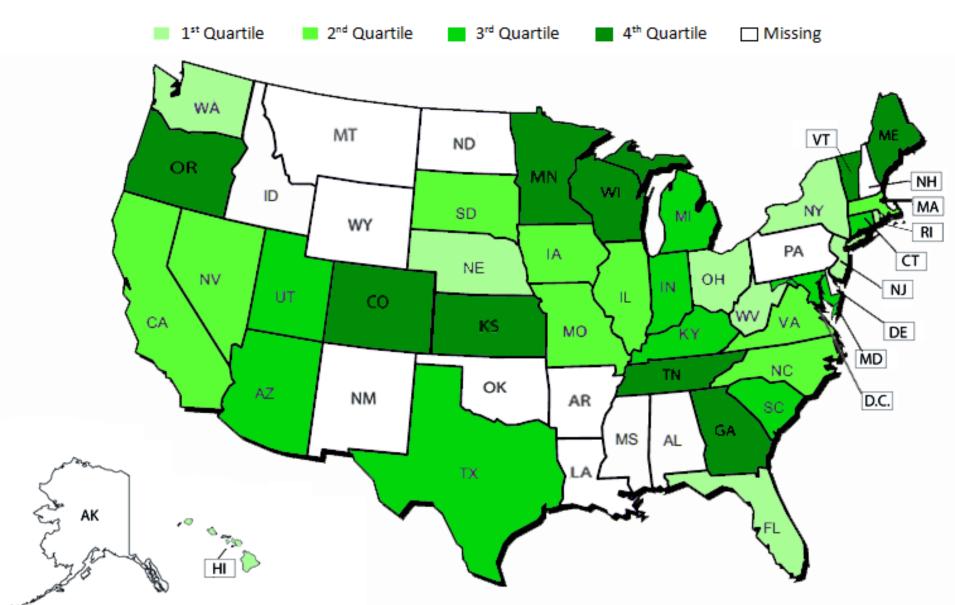
Source: Chisprens Sarety retriever Economics and Data Analysis Resource Center (CSN EDARC), at Pecific Institute for Research and Evaluation (PRE), Calvertin, NO, February 2014. Incidence based on 2011 data from the state and obtained from the Manyland State Inpatient Databases (SID), Reatmone Cost and Unitization Project (RCUP), Agency for Heatmone Research and Guality (AHRQ), and the Manyland Heath Services Cost Review Commission (Batterier, MD). These suckude patients who were dead at the time of discharge, readmission cases, transfers (e.g., from another short or king-term care facility, different acute care hospital), medical misadventures, and/or who suffered non-acute injuries. All counts were based on the patients' state of residence. Population statistics (Ages <1 - 24 years), Unless Experience (Population Extranses, Unless States Department of Heath and Human Services (US DHRS), Centers for Desease Control and Prevention (CDC). Instonal Center for Heath Statistics (ACCES), Redosed-Service Reposition Extranses, Unless States July 1st resident population States (ACCES), age, sex bringhody-race, and Hussanic control.

PRACTICAL EXAMPLE

Percentage (%) change in nonfatal hospitalized injury rates by state among youth aged 0-19 years, 2003 vs. 2011¹

PRACTICAL EXAMPLE

Legend:



NOTABLE EXCLUSIONS

- We exclude the following cases from our incidence counts:
 - Fatalities
 - Medical misadventures
 - Transfers in
 - Readmissions
 - Case counts between 1 and 10

DATA LIMITATIONS

- ž Not all states provide HCUP SID data
- ž SID Data Lag
 - 2013 Most recent year of SID data available
 - 2014 SID Data (January 2016)
 - ≈ 15-20 month lag between current year and most recent SID year available

SUMMARY

- ž Hospital discharge data are an important complement to mortality data
- ž State maps/comparisons can easily be made using these fact sheets

- We target biennial updates for our state fact sheets
 - updated tables are coming for:
 - 2011 (early-2015)
 - 2012 (late-2015)
- TA is available from CSN-EDARC
 - Free of charge

CONTACT INFO

Paul R. Jones, PhD 301-755-2708

jones@pire.org

Children's Safety Network
Economics and Data Analysis Resource Center
11720 Beltsville Drive, Suite 900
Calverton, MD 20705

Web site: www.childrenssafetynetwork.org

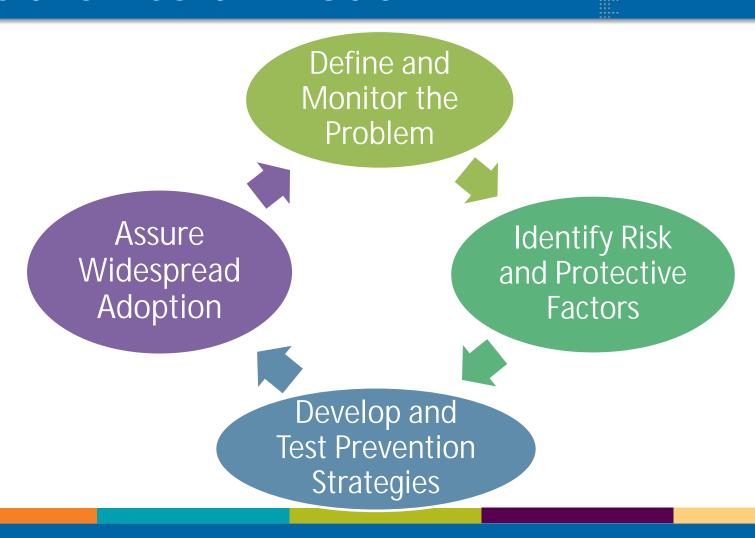
Identifying Effective Strategies for Keeping Infants, Children, and Adolescents Safe

Rebekah Hunt, MPA

January 14th, 2015



Public Health Model



CSN Can Provide

Data Analysis

- Comparisons of your State's injury data to national data
- Advice on state-specific data collection and data sources
- Cost & cost-saving data on childhood injuries and prevention programs in your State
- Data presentation strategies
- Information on injury-specific vulnerable populations in your State and nationally

CSN Can Provide

Capacity Building

- Strategic Planning Guidance
- Ideas for leveraging funding
- Strategies for building and maintaining partnerships
- Examples of model legislation & policies
- Consultation on the evaluation
- Discussion with other injury professionals through our CSN Discuss listsery

CSN Can Provide

Best Practices and Research

- Examples of best practices and model programs implemented at the State and local level
- Information on the initiatives of national organizations
- Literature searches on specific injury prevention topics
- Citations of articles from peer reviewed journals with the latest research and evaluation of injury prevention interventions

Unintentional Injuries

Topic Specific Information

http://www.childrenssafetynetwork.org/injurytopic



- Child Care Safety
- Choking & Strangulation
- Drowning **Prevention**
- Fire & Burn Safety
- Firearms
- Home Safety
- Young Worker Safety
- Falls
- Playground Safety
- Poison Prevention
- Sports Safety
- Traumatic Brain <u>Injuries</u>
- · Rural & Farm Safety
- Safe Sleep
- Bike Safety



Child Passenger Motor Vehicle Crashes Safety

- **Heatstroke in Cars**
- **Off Road Vehicles**
- **Pedestrian Safety**
- **Teen Driving Safety**



Abuse

and

use

Substance

- Prescription Drug Misuse & Abuse
- Underage Drinking & Illicit Drug **Abuse**



ntentional Injuries

- Bullying **Prevention**
- Child **Maltreatment**
- Family/Intimate **Partner Violence**
- Teen Dating **Violence**
- Youth Violence **Prevention**
- Suicide **Prevention**

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INJURY TOPICS

Bullying Prevention Child Care Safety Choking & Strangulation Drowning Prevention Fire & Burn Safety Firearms Home Safety

Motor Vehicle

- Bike Safety
- Child Passenger Safety
- Heatstroke in Cars
- · Off Road Vehicles
- Pedestrian Safety
- Teen Driving Safety

Other Unintentional Injuries

- Falls
- Playground Safety
- Poison Prevention
- Sports Safety
- Traumatic Brain Injuires

Rural & Farm Safety Safe Sleep Suicide Prevention

Falls

Definition: A fall is an unplanned and sudden descent to the ground, the floor, or a lower level that may result in injury. Falls in children are often due to the presence of external hazards, such as stairs, open windows, or playground equipment, and to children's frequent inability to accurately assess risks, curiosity and propensity for risk-taking, and lack of fully developed motor skills and coordination.



Magnitude of the Problem: Falls are the leading cause of injury among U.S. youth ages 1-24. In 2009, falls led among injuries that were treated in emergency departments (EDs) (3,009,403) and among injuries that required hospital admission after an ED visit (51,899). According to the Centers for Disease Control and Prevention's (CDC) Protect the Ones You Love campaign:

- Every day in the U.S. approximately 8,000 children go to the ED for fall-related injuries (nearly 2.8 million visits every year);
- Falls are the leading cause of Traumatic Brain Injury (TBI) for children ages 0 to 4.

Prevention: Strategies to protect children from fall-related injuries include:

- · Installing safety gates on stairs and guards on windows to prevent falls by young children;
- · Providing a soft landing surface below playground equipment;
- . Using the proper safety equipment, such as knee pads, elbow pads, wrist guards, and helmets, while playing sports;
- · Supervising children near fall hazards; and
- · Removing fall hazards whenever possible.

Falls

CSN Infographics

 Playground-Related Injuries Treated in the Emergency Department Jan. 2014

CSN Resource Guides

Fact Sheets

Infographics

org/infographics

Resource Guides

http://www.childrenssafetynetwork.org/resou rce-quides

- Sports Related Concussions
- Firearm-Related Injuries
- Traumatic Brain Injuries (Coming soon!)

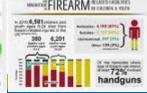
- Firearm Related **Injuries**
- **Playground Injuries**
- Child Passenger Safety
- Pedestrian Safety
- Boating Safety
- Heatstroke in Cars
- All-Terrain Vehicles

- Pedestrian Safety
- Child Maltreatment Prevention
- Prevention of Firearm-Related Injuries
- Prevention of Traumatic Brain Injuries



















Webinars

http://www.childrenssafetynetwork.org/webinars

Prevention of prescription medication abuse Youth Violence Prevention Communities of Practices Regional Networks





CSN Publications by Date Released

Publication	Date Released
Innovative Practices in Traumatic Brain Injury Prevention	Dec. 2014
Injury Prevention: What Works? A Summary of Cost-outcome Analysis for Injury Prevention Programs (2014)	Nov. 2014
Internet Safety: 2014 Resource Guide	Nov. 2014
Halloween Safety	Oct. 2014
Boating Safety	Sep. 2014
Tips for Title V Directors	Sep. 2014
Including Injury and Violence Prevention in the Maternal and Child Health 5-Year Needs Assessment and Annual Plan	Jul. 2014
Pedestrian Safety 2014 Resource Guide	Jul. 2014
Child Maltreatment Prevention 2014 Resource Guide	Jun. 2014
Firearm-Related Injuries among Children Ages 0 Through 14	Apr. 2014
Firearm-Related Injuries among Youth Ages 15 Through 24	Apr. 2014
Child Access to Firearms in the United States	Jan. 2014
MCH Program Injury and Violence-Related State Performance Measures and Priority Needs, 2014	Jan. 2014
Playground-Related Injuries Treated in the Emergency Department	Jan. 2014
Happy Holidays from Children's Safety Network	Dec. 2013
Magnitude of Firearm-Related Fatalities in Children & Youth	Dec. 2013

Firearm-Related Fatalities in US Children & Youth: Homicide

Key Publications

http://www.childrenssafetynetwork.org/publications

- Injury Prevention: What Works? A
 Summary of Cost-outcome Analysis for
 Injury Prevention Programs
- Including Injury and Violence Prevention in the Maternal and Child Health 5-Year Needs Assessment
- MCH Program Injury and Violence-Related State Performance Measures and Priority Needs

Thank you for your participation

Questions?

Please take a moment to complete our short evaluation:

https://www.surveymonkey.com/r/BR2LSTP