

Data Supplement for Arroyo et al.

Characteristics		<u>Hospital Admission</u>		<u>ED Death</u>	
		Unadjusted Odds Ratio (95% CI)		Unadjusted Odds Ratio (95% CI)	
Injury Severity					
	Moderate	REF	--	REF	--
	Severe	5.371	(5.000, 5.769)	17.578	(14.450, 21.384)
Age					
	<1 year	0.604	(0.565, 0.645)	0.308	(0.211, 0.448)
	1-4 years	0.588	(0.552, 0.627)	0.471	(0.350, 0.635)
	5-9 years	0.695	(0.654, 0.738)	0.351	(0.253, 0.487)
	10-14 years	0.684	(0.649, 0.721)	0.378	(0.289, 0.493)
	15-18 years	REF	--	REF	--
Sex					
	Male	REF	--	REF	--
	Female	0.78	(0.747, 0.814)	0.685	(0.550, 0.852)
Race/Ethnicity					
	White	REF	--	REF	--
	Black or African American	1.500	(1.388, 1.622)	3.518	(2.596, 4.767)
	Hispanic	1.297	(1.242, 1.354)	2.142	(1.714, 2.676)
	Asian	1.231	(1.117, 1.357)	1.087	(0.610, 1.935)
	Other	1.27	(1.157, 1.393)	2.707	(1.854, 3.954)
Annual Median Household Income*					
	<100% Federal Poverty Line (FPL)	REF	--	REF	--
	100-200% FPL	0.756	(0.514, 1.113)	0.605	(0.184, 1.991)
	200-300% FPL	0.649	(0.441, 0.955)	0.359	(0.109, 1.182)
	>300% FPL	0.593	(0.403, 0.873)	0.181	(0.054, 0.601)
Distance: Residence to Nearest Acute Hospital					
	0-5 miles	REF	--	REF	--
	6-10 miles	0.958	(0.895, 1.026)	1.158	(0.856, 1.568)
	>10 miles	1.093	(0.999, 1.195)	1.159	(0.773, 1.736)
Insurance Status					
	Private insurance	REF	--	REF	--
	Public insurance	1.549	(1.485, 1.616)	1.861	(1.469, 2.357)
	No insurance	0.641	(0.598, 0.688)	6.41	(5.081, 8.086)
Rural Status					
	Urban	REF	--	REF	--
	Rural	0.758	(0.709, 0.810)	0.712	(0.502, 1.010)
Mechanism of Injury					
	Fall	REF	--	REF	--
	Cut	5.507	(4.596, 6.598)	46.043	(24.946, 84.980)
	Firearm	7.499	(6.459, 8.707)	349.148	(218.453, 558.03)
	Motor vehicle traffic	3.445	(3.225, 3.679)	53.529	(34.192, 83.803)
	Pedal (Bike)	0.823	(0.748, 0.906)	0.485	(0.065, 3.606)
	Pedestrian	2.697	(1.847, 3.938)	79.571	(31.633, 200.157)
	Struck	0.526	(0.494, 0.560)	1.373	(0.721, 2.614)
	Drowning	2.802	(1.077, 7.290)	<0.001	(<0.001, >999)
	Machinery	0.35	(0.222, 0.552)	16.224	(3.716, 70.834)
	Other transportation	1.63	(1.481, 1.794)	5.868	(2.767, 12.444)
	Other	0.538	(0.463, 0.625)	2.232	(0.520, 9.579)

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Intent of Injury		REF	--	REF	--
Unintentional		5.67	(3.070, 10.47)	22.807	(8.375, 62.108)
Intentional		1.917	(1.794, 2.048)	5.075	(4.118, 6.254)
Assault		2.564	(1.782, 3.691)	22.124	(12.343, 39.654)
Undetermined					

Discharged = 14,222 visits; admission = 34,402 visits; death = 467 visits; total = 49,091 visits.  
\*Annual household income based on zip code of residence, using the 2004 Federal Poverty Line of \$18,850 for a family of four.  
REF = Reference variable

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Table 2. Demographics of emergency department (ED) visits by California children for mild injuries and injuries with unclassifiable severity resulting in ED disposition of death, 2005-2009.				
Characteristics	Mild Injury	Unclassifiable Injury	Combined Mild & Unclassifiable Injury	
	# of Visits	# of Visits	# of Visits	%
Number of Visits	482	391	873	100
Age				
<1 year	55	88	143	16
1-4 years	59	112	171	20
5-9 years	54	50	104	12
10-14 years	50	40	90	10
15-18 years	264	101	365	42
Sex				
Female	123	149	272	31
Male	355	240	595	68
Not Available	4	2	6	1
Race/Ethnicity				
White	104	157	261	30
Black/African-American	78	32	110	13
Hispanic	224	125	349	40
Asian	18	24	42	5
American Indian/Alaska Native	1	4	5	1
Other/Not Available	57	49	106	12
Insurance Status				
Private Insurance	122	162	284	33
Public Insurance	163	119	282	32
No Insurance	188	101	289	33
Other	9	9	18	2
Rural Status				
Rural	32	49	81	9
Urban	450	342	792	91
Annual Median Household Income*				
<100% Federal Poverty Line (FPL)	3	0	3	0.3
100-200% FPL	195	99	294	34
200-300% FPL	188	158	346	40
>300% FPL	80	121	201	23
Not Available	16	13	29	3
Distance: Residence to Nearest Acute Hospital				
0-5 miles	427	339	766	88
6-10 miles	39	27	66	8
>10 miles	15	24	39	4
Not Available	1	1	2	0.2
Major Injury Categories				
Fracture/Dislocation	15	0	15	2
Muscle Sprain	4	0	4	0.4
Intracranial/Nervous System	15	0	15	2
Abdomen/Thorax	29	0	29	3
Open Wounds	161	0	161	18
Superficial/Contusion	6	0	6	1

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Crushing	4	0	4	0.4
Burns	1	5	6	1
Other/Not Available	193	385	578	66
Mechanism of Injury^				
Fall	15	7	22	3
Cut	25	0	25	3
Firearm	197	6	203	23
Motor Vehicle Traffic	147	58	206	24
Pedal (Bike)	2	0	2	0.2
Pedestrian	6	1	7	1
Struck	12	1	13	1
Drowning	6	207	213	24
Machinery	1	0	1	0.1
Suffocation	3	72	75	9
Other Transportation	14	5	19	2
Other/Not available	52	42	94	11
Intent of Injury				
Unintentional	276	315	591	68
Intentional	8	64	72	8
Assault	180	10	190	22
Other/Not available	18	2	20	2

\*Annual median household income based on zip code of residence, using the 2004 Federal Poverty Line of \$18,850 for a family of four.

^Mechanism of injury categories are not mutually exclusive and may include classifiable external cause of injury codes (e-code) in any of the five fields.

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Table 3. Demographics of emergency department visits by California children for mild injuries resulting in hospital admission of a length of stay less than 1 day, 2005-2009.		
Characteristics	Length of Stay <1 day	
	# of Visits	%
Number of Visits	31,305	100
Age		
<1 year	2,579	8
1-4 years	4,909	15
5-9 years	7,545	24
10-14 years	6,499	20
15-18 years	9,773	31
Sex		
Female	10,625	34
Male	20,677	66
Not Available	3	<0.1
Race/Ethnicity		
White	11,536	37
Black/African-American	2,416	7
Hispanic	13,515	43
Asian	1,684	5
American Indian/Alaska Native	76	0.2
Other	1,716	5
Not Available	362	1
Insurance Status		
Private Insurance	15,295	48
Public Insurance	13,577	43
No Insurance	2,046	6
Other	383	1

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Table 4. Analysis of interaction effects in the model for emergency department (ED) disposition of California children with moderate and severe injuries*		
Interaction	Admission (p-value)	ED Death (p-value)
<b>Race and Intent of Injury</b>		
White race & assault	0.5065	0.838
White race & intentional injury	0.6119	1.000
Black/African-American race & assault	0.9583	0.837
Black/African-American race & intentional injury	0.8389	0.950
Hispanic ethnicity & assault	0.9583	0.840
Hispanic ethnicity & intentional injury	0.9682	0.990
Asian race & assault	0.8976	0.866
Asian race & intentional injury	0.5824	0.964
<b>Sex and Intent of Injury</b>		
Female sex & assault	0.1599	0.762
Female sex & intentional injury	0.4557	0.056
Female Sex & Firearm Mechanism of Injury	0.4138	0.124
*Each interaction was included in the model separately to assess interaction effects. Interactions terms having a p-value <0.05 was considered to be statistically significant and remained in the model for further analysis.		

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Table 5. Injury-related emergency department visit rates, 2005-2009*.	
Characteristics	ED Visit Rate per 1000 persons
Total	67.1
Age	
0-4 years	76.7
5-9 years	56.5
10-14 years	68.2
15-18 years	66.6
Sex	
Female	53.6
Male	93.9
Race/Ethnicity	
White	79.0
Black/African-American	68.8
Hispanic	54.9
Asian	24.5
American Indian/Alaska Native	16.2
*Rates were calculated by dividing the number of visits in each demographic category from the Office of Statewide Health Planning and Development dataset by the RAND California bridged-race postcensal population estimates by race/ethnicity and age group based on Census 2000 data.	

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Table 6. Injury-related emergency department visit rates by insurance status and severity per 1,000 persons, 2005 & 2007*													
Insurance Type <sup>†</sup>	Denominator	Overall Injury		Mild Injury		Moderate Injury		Severe Injury		Hospitalization		Death	
		#	Rate	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
No Insurance	1,188,640	113,283	95	105,092	88	2,244	1.89	347	0.29	2,318	1.95	115	0.097
Private Insurance	11,681,581	548,706	47	514,064	44	12,058	1.03	1,951	0.17	14,266	1.22	69	0.006
Public Insurance	6,800,556	395,324	58	367,812	54	8,010	1.18	1,898	0.28	14,959	2.20	96	0.014
Total	19,670,777	1,057,313	54	986,968	50	22,312	1.13	4,196	0.21	31,543	1.60	280	0.014

\*Rates were calculated by dividing the number of emergency department visits from the Office of Statewide Health Planning and Development dataset by population estimates by insurance status from the California Health Interview Survey dataset for 2005 and 2007. Rates are visits per 1000 persons.

<sup>†</sup>Private insurance includes commercial insurance, preferred provider organizations (PPO), automobile medical insurance, exclusive provider organizations, and health maintenance organizations (HMO). Public insurance includes Medicare, Medicaid, federal or Title V programs. Other insurance includes disability insurance, Veterans' Affairs plan, and workers' compensation health claims.