A PROFILE OF WAKE COUNTY CHILDHOOD INJURY &



Section III - Results



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III. Results

This section provides a summary of results, with references to related appendices for: A) Wake County Injury and Violence Secondary Data: Mortality and Morbidity; B) Summary of Leading Causes of Injury for Wake County Injury and Violence Secondary Data; and C) Survey of Wake County <u>Organizations</u> Addressing Childhood Health and Safety; D) Survey of Wake County <u>Coalitions</u> Addressing Childhood Health and Safety; and E) Summary of Evidence Based Practices.

A. Wake County Injury and Violence Secondary Data: Mortality and Morbidity

Three main data sources were used to develop an overall picture of injury mortality and morbidity among children age 0-17 in Wake County, North Carolina.

- 1. **Mortality** (deaths) were identified in data available through the NC State Center for Health Statistics (SCHS) and the NC Violent Death Reporting System.
- 2. **Hospital Discharges** with injury diagnoses or coded external cause of injury were identified through the NC SCHS hospital discharge data file and accessed by staff in the Injury and Violence Prevention Branch at NC Division of Public Health (NC DPH).
- 3. **Emergency Department Visits** (injury related) were identified through NC DETECT data and accessed by UNC project staff under a Data Use Agreement with NC DPH.

The next three sections describe and list the causes and number of injury/events for each of the three primary types of data analyzed (i.e. mortality, hospital discharge, ED visit), to the extent possible, emphasizing the five leading types of injury/event for each data source.

Subcategories for the leading injury causes are listed if they represent a minimum of 5% of the total cases for any of the three leading data sources (i.e. mortality, hospital discharge, ED visit).

1. Mortality

Among the 124 fatal injuries occurring for Wake County children ages 0-17 between 2006-2011, the five leading causes of injury death (in descending order) were: 1) Motor Vehicle Crashes (occupants) (n=20); 2) Assault/Physical Violence (n=16); Motor Vehicle Crashes (Pedestrian) (n=15,); 4) Self Inflicted/Self Harm (n=14); and 5) Suffocation (n=11).

Table 10 lists all causes of injury death, with the top five causes shaded yellow. Three of the five leading causes of injury death were unintentional injury types, and two were intentional injury types. The overall child injury fatality rate for Wake County for the years 2010-2011 was 0.08 child injury deaths per 1,000 person-years.

Tab	ole 1	.0. Injury/Event mortality data, Wake County, NC, 2006-2011.	N=124
Inte	entio	onal Injury	30
1.	Ass	ault/Physical Violence	16
	а.	Struck (fight, brawl, blunt/thrown object)	0
	b.	Cutting or piercing instrument	1
	с.	Abuse of child or adult (emotional, physical, or sexual)	5
	d.	Firearms or explosives	4
	е.	Human bite	0
	f.	Rape	0
2.	Sel	f Inflicted/Self Harm	14
	а.	Poisoning	0
	b.	Cutting or piercing instrument	0
	с.	Suffocation (Hanging)	10
	d.	Firearms or explosives	4
Uni	inter	ntional Injury	93
3.	Мс	tor Vehicle Crashes ^a	61
	а.	Cars/trucks/buses (occupants)	20
		i. Passenger	15
		ii. Driver	5
	b.	Pedestrian	15
	с.	Bicyclist	1
	d.	Motorcyclist	0
	е.	Other specified	1
4.	Poi	soning/overdose	3
5.	Bic	vcle injury/crashes (NOT involving a motor vehicle)	0
6	Eal		1
0.	7 01	Slipping tripping stumbling	1
	u. h	Suppring, tripping, stamping	0
	<i>U</i> .	From playaround equipment	0
	d.	From one level to another	0
	υ. ρ	On or from stairs/stens	0
<u> </u>	f.	From hed	0
7	J.	tural/Environmental Factors (a.g. weather related insect/animal hites)	6
/.	Nd	Venemous and nen venemous arthreneds (insects) and arashnids (a.g. sniders)	0
	u. 6	Venomous and non-venomous anthropous (insects) and arachinias (e.g. spiders)	0
	0.	Doy bile	0
	с. d	Excessive heat/cold, exposure to weather/storms	5
	u.		3
8.	FILE	earm	3
9.	Dro	owning/submersion	4
10.	Bui	ns, including fire and scalds	4
11.	Suf	focation/Choking/Breathing Threat	11
12.	Str	uck by or against	0
	а.	Other struck against with/without fall	0
	b.	In sports	0
	с.	By Other stationary object	0
	d.	By Furniture	0
	е.	By falling object	0
Un	dete	rmined Intent of Injury	1

^a For mortality data, all MVC deaths were combined since there were few that clearly coded traffic vs. non-traffic. Almost all that were specified were traffic but there were some coded as non-traffic.

2. Morbidity—Hospital Discharges

Among the 3,007 injury-related Hospital Discharges occurring among Wake County children ages 0-17 between 2006-2011, the five leading causes of injury morbidity (in descending order) were: 1) Falls (n=646); 2) Motor Vehicle Crashes (traffic) (n=309); 3) Self Inflicted/Self Harm (n=272); 4) Burns, including fire and scalds (n=203); and 5) Assault/Physical Violence (n=165).

Table 11 lists causes of injury-related hospital discharge, with the top five causes shaded yellow. Three of the five leading causes of injury-related hospital discharges were unintentional injury types, and two were intentional injury types. The overall hospital discharge rate for childhood injury in Wake County, 2010-2011 was 2.22 hospital discharges per 1,000 person-years.

Detailed tables describing the hospital discharge data for injured Wake County children ages 0-17 years, 2006-2011, are included in Appendix J. Overall, 58.1% of the injury hospital discharges were for male children and males accounted for over 50% of injury hospitalizations in all age groups. Children ages 15-17 years had more injury hospitalizations than any other age group and accounted for 27.7% of all injury hospital discharges. The most frequent injury diagnosis category for injury hospitalizations was Fractures (33.5%), followed by Poisonings (10.4%). Almost 9 out of 10 injury related hospital discharges were discharged home (89.1%) and there were 29 deaths in hospital for injured patients (1.0%).

Tal	ole 1	11. Injury/event hospital discharge data, Wake County, NC, 2006-2011.	N=3,007
Inte	enti	onal Injury	437
1.	As	sault/Physical Violence	165
	а.	Struck (fight, brawl, blunt/thrown object)	22
	b.	Cutting or piercing instrument	16
	С.	Abuse of child or adult (emotional, physical, or sexual)	Not available ^a
	d.	Firearms or explosives	20
	е.	Human bite	Not available ^a
	ţ.	Каре	Not available [°]
2.	Sel	f Inflicted/Self Harm	272
	а.	Poisoning	195
	b.	Cutting or piercing instrument	35
	С.	Suffocation (Hanging)	D
	d.	Firearms or explosives	0
Uni	inte	ntional Injury	2,320
3.	Mo	otor Vehicle Crashes (traffic)	309
	а.	Cars/trucks/buses (occupants)	Not available ^a
		i. Passenger	Not available ^a
		ii. Driver	Not available ^a
	b.	Pedestrian	Not available ^a
	С.	Bicyclist	Not available ^a
	d.	Motorcyclist	Not available ^a
	е.	Other specified	Not available ^a
4.	Ро	isoning/overdose	157
5.	Bic	ycle injury/crashes (NOT involving a motor vehicle)	Not available ^a
6.	Fal	ls	646
	а.	Slipping, tripping, stumbling	Not available ^a
	b.	Fall striking against other object	Not available ^a
	с.	From playground equipment	Not available ^a
	d.	From one level to another	Not available ^a
	е.	On or from stairs/steps	Not available ^a
	f.	From bed	Not available ^a
7.	Na	tural/Environmental Factors (e.g. weather related, insect/animal bites)	144
<u> </u>	<i>a</i>	Venomous and non-venomous arthronods (insects) and arachnids (e.a. spiders)	Not available ^a
	h.	Dog hite	Not available ^{a}
	<u>с</u>	Bite/other injury caused by animals (including rats and snakes)	Not available ^{a}
<u> </u>	d.	Excessive heat/cold. exposure to weather/storms	Not available ^{a}
8.	Fire	earm	b
0	Dro		17
10	Bu		202
11	Sui		203
11.	Sui		40
12.	Str	Other struck geninet with (without fell	162
	<i>a</i> .	Uner struck against with/without jail	Not available
	<i>D</i> .	III Sports	Not available
	С. Л		Not available
	<i>u</i> .	Dy fulling abject	Not available
	е.		
Un	dete	ermined Intent of Injury	56

^a Sub-mechanism data for hospital discharges were not available to the research team, but may be available through a data request to the Injury and Violence Prevention Branch at the NC DPH. ^bData use agreements require that frequencies of 1-9 be masked.

3. Morbidity—Emergency Department Visits

Among the 138,047 injury-related Emergency Department Visits occurring among Wake County children ages 0-17 between 2006-2012, the five leading causes of injury morbidity (in descending order) were: 1) Falls (n=36,833); 2) Struck By/Against (n=25,766); 3) Motor Vehicle Crashes (traffic-occupants) (n=9,953); 4) Natural/Environmental Factors (e.g. weather related, insect/animal bites) (n=7,250); and 5) Bicycle injury/crashes (NOT involving a motor vehicle) (n=3,007).

Table 12 lists causes of injury-related Emergency Department Visits, with the top five causes shaded yellow. The overall ED visit rate for childhood injury in Wake County, 2011-2012 was 94.31 ED visits per 1,000 personyears.

Unintentional injury types dominated the leading causes of injury-related emergency department visits; no intentional injury types were identified in the top five causes for ED visits. Detailed tables describing the Emergency Department Visit data for injured Wake County children ages 0-17 years, 2006-2012, are included in Appendix K.

Between January 1, 2006 and December 31, 2012, a total of 138,047 injury-related emergency department (ED) visits were made by patients aged 0-17 who either resided in Wake County or visited a Wake County based hospital emergency department. More than half these visits (58.5%) were by male children and males accounted for more than half the injury-related ED visits for all age groups. The highest numbers of injury-related ED visits for Wake County children ages 1-4 years, followed by those 10-14 years. The number of injury-related ED visits for Wake County children increased steadily each year between 2006 and 2012. Nine out of ten injury-related ED visits by Wake County children resulted in being discharged to home (91.2%), while 4.5% of these visits to the ED resulted in being admitted to the hospital or transferred to another hospital. The first listed injury diagnosis was Open Wound for almost a quarter of the injury-related ED visits (24.1%) and another 15.1% listed Fracture as the first diagnosis. Falls were overwhelmingly the leading injury mechanism for these ED visits, accounting for 30.8% of all injury ED visits for Wake County children during these years.

Tal	ole 1	2. Injury/event emergency department visit data, Wake County, NC, 2006-2012.	N=138,047
Int	entio	onal Injury	2,893
1.	Ass	sault/Physical Violence	2,044
	а.	Struck (fight, brawl, blunt/thrown object)	1,002
	b.	Cutting or piercing instrument	99
	с.	Abuse of child or adult (emotional, physical, or sexual)	152
	d.	Firearms or explosives	92
	е.	Human bite	75
	f.	Rape	87
2.	Sel	f Inflicted/Self Harm	849
	а.	Poisoning	605
	b.	Cutting or piercing instrument	172
	с.	Suffocation (Hanging)	22
	d.	Firearms or explosives	a
Un	inter	ntional Injury	116,378
3.	Мс	otor Vehicle Crashes (traffic)	10,974
	а.	Cars/trucks/buses (occupants)	9,953
		i. Passenger	8,046
		ii. Driver	1,893
	b.	Pedestrian	310
	с.	Bicyclist	142
	d.	Motorcyclist/Motorcycle Passenger	178
	е.	Other specified	62
4.	Poi	soning/overdose	2,142
5.	Bic	ycle injury/crashes (NOT involving a motor vehicle)	3,007
6.	Fal	ls	36,833
	а.	Slipping, tripping, stumbling	6,776
	b.	Fall striking against other object	5,252
	с.	From playground equipment	3,091
	d.	From one level to another	2,854
	е.	On or from stairs/steps	2,345
	f.	From bed	2,077
7.	Na	tural/Environmental Factors (e.g. weather related, insect/animal bites)	7.250
	а.	Venomous and non-venomous arthropods (insects) and arachnids (e.a. spiders)	3.675
	b.	Dog bite	1.948
	с.	Bite/other injury caused by animals (including rats and snakes)	601
	d.	Excessive heat/cold, exposure to weather	294
8.	Fire	earm	73
9	Dro	hyping/submersion	114
10	Bu	rns, including fire and scalds	1 516
11	Suf	focation	97
11.	Sui		87 25 766
12.	Str	Other struck against with (without fall	25,/66
	<i>u</i> .		10,978
	D.	III sports	8,942
<u> </u>	С.	By Other stationary object	2,304
	<i>u</i> .	By Fulling object	2,131
	е.	By jailing object	1,304
Un	dete	rmined Intent of Injury	235

^a Data use agreements require that frequencies of 1-9 be masked.

B. Wake County Injury and Violence Secondary Data: Leading Cause of Injury Summary

1. Overall Summary

This section summarizes additional data about the leading causes of injury identified through secondary data analysis of mortality, hospital discharge, and emergency department visit data. Table 13 lists the top five injury causes for each data source. Color coding is used to depict if/how the five leading causes of injury within one data source were also a top five leading cause of injury in another data source. In Table 14, we describe the process used to develop a list of the ten overall leading causes of injuries occurring among Wake County children ages 0 through 17. The ten leading injury causes are listed in column two in Table 14.

Table 13. Five leading injuries/events for mortality, hospital discharge, and emergency department data.										
	Mortality (2006-2	Hospital Discharge	(2006-2	2011)	ED Visits (2006-2012)					
	N = 124			N = 3,00	7		N = 138,047			
Rank	<u>Mortality</u> Injury Causes	#	%	<u>Hospital Discharge</u> Injury Causes	#	%	<u>ED</u> Visit Injury Causes	#	%	
1	MVC -Occupant	20	16.1	Falls	646	21.5	Falls	36,833	26.7	
2	Assault	16	12.9	MVC Traffic-All	309	10.3	Struck By or Against	25,766	18.7	
3	MVC -Pedestrian	15	12.1	Self-Inflicted/Self- Harm	272	9.0	MVC Traffic- Occupant	9,953	7.2	
4	Self-Inflicted/Self-Harm	14	11.3	Burns	203	6.8	Natural/Environ- mental Factors	7,250	5.3	
5	Unintentional Suffocation/Choking/ Breathing Threat	11	8.9	Assault	165	5.5	Bicycle injury/ crashes	2,994	2.2	

Table 14. Process used to Identify the 10 overall leading injury causes, across three primary data sources.						
Pro	ocess Summary	10	Leading Injury Causes			
•	We studied the data in Table 13 by moving from left to right across data sources, and from rank 1 to 5 within each data source. <i>Motor Vehicle Crashes (MVCc)</i> (occupant, pedestrian, all) were one of the five leading causes for <u>all three</u> data sources, thus their placement as the 1 st and 3 rd leading injury causes. MVC-Pedestrian was kept separate as the 3 rd leading cause given differences in prevention approaches for occupants versus pedestrians. <i>Assault</i> and <i>Self-Inflicted/Self Harm</i> were in the top five injury causes for both <u>mortality</u> and <u>hospital discharges</u> , thus their placement as 2 nd and 4 th leading causes. <i>Falls</i> was in the top five injury causes for both <u>hospital discharges</u> and <u>ED</u> <u>visits</u> , and the number of fall events was significantly higher than the number of deaths due to <i>Unintentional Suffocation</i> , thus the placement of <i>Falls</i> and <i>Suffocation</i> in the 5 th and 6 th leading causes, respectively. <i>Burns, Struck By/Against, Natural/Environmental Factors</i> , and <i>Bicycle</i> <i>Injury/Crashes</i> were placed in the 7 th through 10 th positions because they were among the five leading injury causes for hospital <u>discharge</u> or <u>ED visits</u> only.	1. 2. 3. 4. 5. 6. 7. 8. 9. 10	MVC Traffic-Occupant Assault MVC Traffic-Pedestrian Self-Inflicted/Self- Harm Falls Unintentional Suffocation Burns Struck By or Against Natural/Environmental Factors Bicycle Injury/Crashes			

2. Additional Information on Leading Causes of Injury (Hospital Discharge and ED Visits)

Table 15 summarizes the hospital charges and length of stay for the leading causes of injury. Charges vary widely from \$601 to \$565,721. Length of hospital stay (mean or median) also varied from 0 to 104 days.

Table 15. Hospital charges^a and length of stay, leading injury causes hospital discharge data, Wake County children, ages 0-17 years, 2006-2011.^{b,c}

Injury Event	Hosp	ital Charges	Hospital Length of Stay (in days)		
Intentional Injury	Mean	Range	Mean	Range	
Assault/Physical Violence (N=165)	\$32,502	\$686-\$500,899	6.7	0-104	
Self Inflicted/Self Harm (N=272)	\$11,997	\$707-\$126,330	5.6	0-43	
Unintentional Injury	Median	Range	Median	Range	
Motor Vehicle Crashes – Traffic (N=309)	\$30,395	\$2,322-\$398,051	3	0-62	
Falls (N=646)	\$13,773	\$601-\$524,339	1	0-98	
Natural/Environmental Factors (e.g. weather related, insect/animal bites) (N=144)	\$8,227	\$955-\$143,866	2	0-24	
Burns, including fire and scalds (N=203)	\$12,525	\$1,187-\$565,721	3	0-91	
Suffocation (N=46)	\$13,996	\$823-\$199,952	2	0-45	
Struck by or against (N=162)	\$14,995	\$2,000-\$148,580	1	0-85	

^a "Hospital charges" are reported by the hospital and do not necessarily reflect actual costs or what the patient or insurance company actually pays.

^bAssault/Physical Violence and Self Inflicted/Self Harm are intent level groupings of injury causes. As such, they are made up of several mechanism level groupings. The hospital discharge data were provided to us aggregated at the mechanism level. This allowed us to calculate means for each of these groups but not medians.

^cMVC-Traffic – Occupant, MVC-Traffic – Pedestrian, and Bicycle Injury/Crash are not available in the hospital discharge data due to limitations in our access to the data at the sub-mechanism level.

For Emergency Department Visit data, we also analyzed Patient Sex (Table16), Patient Age Group (Table 17), Emergency Discharge Disposition (Table 18), and Expected Source of Payment (Table 19) for the ten causes of injury overall.

Table 16. Top ten causes of injury by sex, ED visit data, Wake County children, ages 0-17 years, 2006-2012.						
Dat	iont Cov	Fen	nale	Male		
Put	ient sex	N	%	N	%	
Inte	entional Injury					
1.	Assault/Physical Violence	728	35.6	1,316	64.4	
2.	Self Inflicted/Self Harm	596	70.3	252	29.7	
Uni	ntentional Injury					
3.	Motor Vehicle Crashes (traffic) – Occupants ^a	5,449	54.4	4,568	45.6	
4.	Motor Vehicle Crashes (traffic) - Pedestrians ^a	120	38.2	194	61.8	
5.	Bicycle injury/crashes (NOT involving a motor vehicle) ^a	883	29.3	2,136	70.8	
6.	Falls	15,422	41.9	21,415	58.1	
7.	Natural/Environmental Factors (e.g. weather related, insect bites)	3,224	44.5	4,026	55.5	
8.	Burns, including fire and scalds	685	45.0	836	55.0	
9.	Suffocation	41	47.1	46	52.9	
10.	Struck by or against	8,401	32.6	17,365	67.4	

^a For these sub-mechanism causes, we used a slightly different approach to enumerating the total visit counts. We scanned through all E-codes (up to five) present in the visit record and if any of the record's E-code matched these sub-mechanism causes, it would be counted in that category. As a result, it is possible that some records may match more than one of these sub-mechanism causes. This differs from our approach for the other causes listed here, where each record would be counted in only one intent or mechanism, either by matching to only that category or, in the case of multiple or conflicting codes, through our text-review adjudication process.

Table 17. Top ten causes of injury by age group, ED visit data, Wake County children, ages 0-17 years, 2006-2012.									2012.			
Patient Age Group		0 ye	0 years		1-4 years		5-9 years		10-14 years		15-17 years	
	5 1	N	%	N	%	N	%	%	%	N	%	
Int	entional Injury											
1.	Assault/Physical Violence	54	2.6	91	4.5	177	8.7	625	30.6	1,097	53.4	
2.	Self Inflicted/Self Harm	0	0					252	29.7	588	69.3	
Un	intentional Injury											
3.	Motor Vehicle Crashes (traffic) – Occupants ^b	500	5.0	1,738	17.4	2,170	21.7	2,372	23.7	3,237	32.3	
4.	Motor Vehicle Crashes (traffic) - Pedestrians ^b	0	0	51	16.2	64	20.4	93	29.6	106	33.8	
5.	Bicycle injury/crashes (NOT involving a motor vehicle) ^b	0	0	377	12.5	1,249	41.4	1,111	36.8	282	9.3	
6.	Falls	1,993	5.4	13,155	35.7	10,120	27.5	8,267	22.4	3,302	9.0	
7.	Natural/Environmental Factors (e.g. weather related, insect bites)	219	3.0	2,501	34.5	2,046	28.2	1,553	21.4	931	12.8	
8.	Burns, including fire and scalds	133	8.7	763	50.2	263	17.3	197	13.0	165	10.9	
9.	Suffocation	35	40.2	31	35.6							
10.	Struck by or against	418	1.6	5,402	21.0	6,048	23.5	8,477	32.9	5,421	21.0	

^aThe symbol [---] indicates cell counts <10 but >0. Data use agreements require those data to be suppressed.

^bFor these sub-mechanism causes, we used a slightly different approach to enumerating the total visit counts. We scanned through all E-codes (up to five) present in the visit record and if any of the record's E-code matched these sub-mechanism causes, it would be counted in that category. As a result, it is possible that some records may match more than one of these sub-mechanism causes. This differs from our approach for the other causes listed here, where each record would be counted in only one intent or mechanism, either by matching to only that category or, in the case of multiple or conflicting codes, through our text-review adjudication process.

Table 18. Top ten causes of injury by disposition, ED visit data, Wake County children, ages 0-17 years, 2006-2012.

ED Disposition ^a		Discha Home/S	rged to Self-care	Admitted or Transferred	
		N	%	N	%
Inte	entional Injury				
1.	Assault/Physical Violence	1,626	85.9	192	10.1
2.	Self Inflicted/Self Harm	177	22.6	553	70.5
Uni	ntentional Injury				
3.	Motor Vehicle Crashes (traffic) – Occupants ^b	8,475	91.2	445	4.8
4.	Motor Vehicle Crashes (traffic) - Pedestrians ^b	203	70.5	74	25.7
5.	Bicycle injury/crashes (NOT involving a motor vehicle) ^b	2,511	90.2	154	5.5
6.	Falls	31,354	91.2	1,445	4.2
7.	Natural/Environmental Factors (e.g. weather related, insect bites)	6,193	91.8	255	3.8
8.	Burns, including fire and scalds	1,133	81.6	200	14.4
9.	Suffocation	35	42.7	42	51.2
10.	Struck by or against	22,510	94.1	378	1.6

^a This table presents only Discharged Home/Self-care and Admitted or Transferred to Another Hospital.

^b For these sub-mechanism causes, we used a slightly different approach to enumerating the total visit counts. We scanned through all E-codes (up to five) present in the visit record and if any of the record's E-code matched these sub-mechanism causes, it would be counted in that category. As a result, it is possible that some records may match more than one of these sub-mechanism causes. This differs from our approach for the other causes listed here, where each record would be counted in only one intent or mechanism, either by matching to only that category or, in the case of multiple or conflicting codes, through our text-review adjudication process.

The pattern of expected payment source varies by cause of injury (Table 19). Private insurance was expected to pay more often (>50%) for Motor Vehicle Crashes, Self-Inflicted/Self-Harm, Struck By or Against, Falls, and Bicycle injury. Medicaid/Medicare was expected to pay most often (>40%) for Suffocation, Assault/Physical Violence, Burns, and Natural/Environmental Factors.

Table 19. Top ten injury causes by expected source of payment, ED visit data, Wake County children, ages 0-17 years, 2006-2012.^{a,b,c}

Expected Source of Payment		Insurance	Medicaid/	/Medicare	Self-Pay		
		%	N	%	N	%	
Intentional Injury							
Assault/Physical Violence	489	24.9	934	47.5	383	19.5	
Self Inflicted/Self Harm	459	56.7	208	25.7	104	12.8	
Unintentional Injury							
Motor Vehicle Crashes (traffic) – Occupants ^b	5,428	56.5	2,114	22.0	1,752	18.2	
Motor Vehicle Crashes (traffic) – Pedestrians ^b	181	59.0	74	24.1	40	13.0	
Bicycle injury/crashes (NOT involving a motor vehicle) ^b	1,489	51.5	882	30.5	334	11.6	
Falls	19,560	55.4	10,905	30.9	3,276	9.3	
Natural/Environmental Factors (e.g. weather related,	2.606	37.2	3.082	44.0	974	13.9	
insect/animal bites)	,		- /				
Burns, including fire and scalds	561	38.2	659	44.9	180	12.3	
Suffocation	30	36.6	40	48.8			
Struck by or against	13,920	56.4	7,148	29.0	12,136	9.2	

^a This table presents only Private Insurance, Medicaid/Medicare, and Self-Pay categories of expected source of payment. Other categories included other government payment, workers compensation, and Other /Unknown.

^b For these sub-mechanism causes, we used a slightly different approach to enumerating the total visit counts. We scanned through all E-codes (up to 5) present in the visit record and if any of the record's E-code matched these sub-mechanism causes, it would be counted in that category. As a result, it is possible that some records may match more than one of these sub-mechanism causes. This differs from our approach for the other causes listed here, where each record would be counted in only one intent or mechanism, either by matching to only that category or, in the case of multiple or conflicting codes, through our text-review adjudication process.

^{*c*} The symbol [---] indicates cell counts <10 but >0. Data use agreements require those data to be suppressed.

3. Detailed Summary for Leading Causes of Childhood Injury

This section provides detailed results about <u>leading causes of injury</u> among Wake County children ages 0-17 years.

#1 - Motor Vehicle Crashes – Traffic and #3 - Motor Vehicle Crashes – Pedestrian

Motor vehicle crashes (MVCs) - occupants were the leading injury cause of death, motor vehicle *traffic* crashes - all were the second leading injury cause of hospitalization, and motor vehicle traffic crashes – occupants were the third leading injury cause of ED visits for children in Wake County. For the mortality data, all motor vehicle crash deaths, including both traffic and non-traffic, were combined due to lack of specificity in many of the codes assigned. Of those specifically coded, most were MVC-traffic related deaths. Of the 61 deaths to Wake County children in motor vehicle crashes in the years 2006-2011, 24 were coded as an unspecified person, while 20 were coded as occupants and 15 as pedestrians (Table 9). Twice as many males (41) died in motor vehicle crashes as females (20). Older children were at greater risk, with 26 deaths in the 15-17 year age group. Of those, 11 were occupants of the motor vehicle and 12 were unspecified.

In the hospital discharge data, we were unable to breakout motor vehicle occupants from pedestrians and other or unspecified roles, which are coded at the sub-mechanism coding level. There were 309 hospital

discharges for motor vehicle traffic crash related injury to Wake County children ages 0-17 years during the years 2006-2011, accounting for 10.3% of all injury related hospital discharges for Wake County children during that time (Tables 10). Over half (53.1%) were for the age group 15-17 years, with another 19.1% for ages 10-14 years. Males accounted for 57.0% of the hospital discharges due to motor vehicle crashes. Motor vehicle crash injuries resulted in the death of the patients for 5.5% in the hospital discharges related to these injuries, much higher than the 1.0% of overall injury related hospital discharges resulting in death. Another 8.4% of these hospitalizations resulted in the patient being discharged to another healthcare facility, such as a long term care or rehabilitation facility. Injuries due to motor vehicle crashes have the second highest hospital charges reported for the leading injury causes, with a median charge of \$30,395; they also have a median length of stay in the hospital of 3 days.

Motor vehicle traffic crash related injury resulted in 10,974 ED visits for children ages 0-17 years in Wake County during the years 2006-2012 (Table 20). Most children injured in MVCs and treated in the ED were occupants of the motor vehicle (90.7%) and most of those (80.8%) were passengers. The ED visit rate for MVCoccupants for Wake County children, 2011-2012, was 6.23 per 1,000 person years. Slightly over half of the MVC occupant injury related ED visits were by females (54.4%). The number of injured children in MVCs increased sharply in the 15-17 year age group, who accounted for 32.3% of all MVC occupant injury ED visits in these data. While MVC occupant injury has the potential to be quite serious, 91.2% of these ED visits resulted in being discharged home, with only 4.8% admitted to the hospital or transferred to another hospital or healthcare facility. The proportion of MVC occupant related ED visits expected to be paid by Medicaid/ Medicare (22.0%) was lower than for injury overall, while the proportion expected to be paid by private insurance (56.5%) was slightly higher. The 18.2% of MVC occupant injury related ED visits coded as self-pay was higher than the 10.9% self-pay for Wake County child injury related ED visits overall.

Table 20. Motor vehicle crashes – traffic, injured person Wake County								
children ages 0-17 years, ED visits 2006-2012 (n=10,974).								
MVC Type	Frequency	Percent of MVC-Traffic						
Occupant	9,953	90.7						
Passenger	8,046	73.3						
Driver	1,893	17.2						
Occupant - Unspecified	14	0.1						
Pedestrian	310	2.8						
Motorcyclist/Motorcycle Passenger	178	1.6						
Bicyclist ^a	142	1.3						
Other specified	62	0.6						
Unspecified	329	3.0						

^a Note that these include only bicyclists injured in motor vehicle traffic crashes. Another 3,007 ED visits for bicycle crash injuries were reported as a sub-mechanism of Other Transportation injury and did not include a MVC code.

MVC pedestrian injury related ED visits accounted for only 2.8% of all MVC traffic related injury ED visits. Of these, 61.8% were for males and 33.8% were for patients ages 15-17 years. Another 29.6% were for ages 10-14 and 20.4% were ages 5-9. The overall ED visit rate for MVC-pedestrain injuries to Wake County children was 0.16 per 1,000 person-years. While 6 of the 14 child pedestrian *deaths* were children under 5 years of age, 83.8% of *ED visits* for child pedestrian injury are for ages 5-17 years. ED visits for pedestrians injured in MVCs resulted in admission to the hospital or transfer to another hospital 25.7% of the time, with 70.5% discharged home from the ED. Private insurance was expected to pay for 59.9% of ED visits for pedestrians injured in MVCs, while Medicaid/Medicare was expected to pay for 24.1% and 13.0% of the visits were coded as self-pay.

Children who are hit by motor vehicles as pedestrians have a high case fatality rate, with 15 child pedestrian deaths reported in Wake County during 2006-2011. The NC Department of Transportation (NC DOT) reports

203 crashes in Wake County for the years 2006-2010 involving pedestrians ages 15 years or younger, of which 59% involved a male pedestrian. For comparison, during the same years, NC DOT reports 133 MVCs in Wake County involving child bicyclists ages 15 years or younger, 84% of whom were male. These crashes may or may not involve an injury to the child pedestrian but did generate an official crash report. There has currently been no attempt to link these crash reports to ED visit data. A report prepared for JRE in 2012 includes additional details about MVCs involving child pedestrians in Wake County reported to NC DOT in 2007-2010, including that 20% of all Wake County pedestrian crashes during these years involved children under age 18 and over 50% of child pedestrian crashes involved children ages 10-14. Over 50% of child pedestrian crashes occurred between 2pm and 8pm and 55% involved a male child. Perhaps most helpful, this report identified geographical "hot spots" in Wake County – areas where child pedestrian crashes were most likely to happen, allowing for targeted prevention strategies.

The Wake County EMS Pediatric Trauma Toolkit for 2011-2012 reports that 26% of EMS attended trauma calls for patients 0-15 years were for motor vehicle traffic crashes. Wake County EMS data for 2009-2012 in NC DETECT indicate that "Traffic Accident" was the Dispatch Complaint for over 10% of *all* calls for patients 0-17 years.

#2 - Assault

Assault is a leading cause of injury to children in Wake County. It is the second leading cause of injury death behind motor vehicle crashes, with 16 assault related deaths during the years 2006-2011. All assaults are intentionally inflicted injuries with the potential to result in death or serious injury.

Of the 16 assault related deaths reported, 10 were children under age 5, including all 5 deaths due to child maltreatment/neglect. Nine of the 16 deaths were females and 4 were the result of firearm injury. Five deaths were infants under 1 year of age, including 3 of the 6 deaths due to unspecified assault mechanisms.

Of the 165 hospital discharges for assault related injury during the years 2006-2011, almost half (47.3%) were for patients ages 15-17 years. Another 21.8% were for infants under 1 year of age. Over 2/3 of the patients discharged following assault related injury were male (67.3%). Being struck in a fight or brawl or with a blunt or thrown object accounted for 13.3% of the assault related hospital discharges but injuries due to other specified types of assault were the most common (44.2%) and we were unable to get further into these submechanism codes. While assaultive injuries from firearms resulted in only 20 hospital discharges during this time period, these injuries resulted in the highest median hospital charges reported, at \$35,489, and a median length of stay of 5 days.

Assault injuries to Wake County children 0-17 years of age resulted in 2,044 ED visits during the years 2006-2012 (Table 21). Of these, 53.7% were for children ages 15-17 years and another 30.6% were for ages 10-14 years. Almost two out of three of these ED visits (64.4%) were for males. The overall rate of assault related ED visits for Wake County children, 2011-2012, was 1.09 per 1,000 person-years. ED visits due to assault related injury were more likely to be admitted to the hospital or transferred to another hospital (10.1%) than injury related ED visits overall (4.5%). Almost half (47.5%)of assault related injury ED visits had Medicaid/Medicare coded as the expected source of payment for the visit, compared to 32.8% overall for injury related ED visits, and another 19.5% were coded as self-pay, almost twice the 10.9% self-pay reported overall for injury related ED visits. Almost half of the assault injuries resulting in ED visits were due to being struck, with the most frequent sub-mechanism being struck in an unarmed fight/brawl (41.5%), and another 7.5% being struck by a blunt or thrown object. Other specified means, which could not be further delineated, accounted for 19.5% of the assault related ED visits.

Table 21. Leading causes of assault injury, Wake County children ages 0-17 years,ED visits 2006-2012 (n=2,044).							
Assault Type	Frequency	Percent of Assault Injury					
Struck – Unarmed Fight/Brawl	848	41.5					
Other Specified Means	402	19.7					
Striking with Blunt/Thrown Object	154	7.5					
Child Abuse (coded Perpetrator of Abuse)	152	7.4					
Cutting/Piercing Instrument	99	4.8					
Firearms(including air gun)	92	4.5					
Rape	87	4.3					
Human Bite	75	3.7					

We identified 152 ED visits for Wake County children, 0-17 years of age, 2006-2012, treated in the ED for an injury and receiving a code indicating a perpetrator of abuse and/or neglect (Table 17). These numbers are undoubtedly an underestimate of this cause of childhood injury. It is important to note that 7.4% of the ED visits coded for intentional assaultive injuries received a code for a perpetrator of abuse. Mortality data did include specific codes for maltreatment and neglect; of the 5 child deaths due to maltreatment and neglect in Wake County, 2006-2011, all indicated an *unspecified* perpetrator.

To provide context, the number of reports of child abuse and neglect investigated in Wake County increased each year from 3,261 in fiscal year 2006 to 5,381 in fiscal year 2008 and then dropped each year to 4,361 in fiscal year 2012. Between 44-46% of the reports each year were for children 0-5 years of age. Over 60% of the children involved in these investigations had no finding of abuse of neglect, with about half of those referred for some kind of service and the rest having either unsubstantiated findings or no referral for service (Source: UNC School of Social Work Management Assistance website, http://ssw.unc.edu/ma/). The 2013 Wake County YOUTH THRIVE report noted there were 4,442 reports to Child Protective Services in 2012, resulting in 1,072 (24%) confirmed cases of abuse or neglect involving 2,416 children; 318 children entered foster care in Wake County in 2012.

#4 - Self-Inflicted / Self-Harm

Self-inflicted injury was the third leading cause of injury death to Wake County children in the years 2006-2011, with 14 suicide deaths. While all of these deaths were to children ages 10-17, 8 of them were in the younger 10-14 year age group. Most of the suicide deaths (11) were males. Ten of the 14 deaths were due to hanging and the remaining 4 were due to firearms.

Of the 272 hospital discharges due to self-inflicted injury for Wake County children during the years 2006-2011, 70.6% were children 15-17 years of age and another 27.6% were ages 10-14 years. Self-inflicted injury related hospital discharges were overwhelmingly for female patients (71.0%) and due to poisoning (71.7%), with another 12.9% due to injury with a cutting or piercing instrument.

There were 270 ED visits for self-inflicted injury by Wake County children in the years 2006-2012, with an overall rate of 0.56 ED visits per 1,000 person-years for 2011-2012. ED visits for self-inflicted injury by Wake County children ages 0-17 years during 2006-2012 were similar to hospital discharges, in large part because 70.5% of these ED visits resulted in admission or transfer to another hospital. Only 22.6% of these visits were discharged home, compared to 91.2% of injury related ED visits overall. ED visits due to self-inflicted injury involved children 10 years and older 99.9% of the time (69.3% ages 15-17 years and 30.6% ages 10-14 years). These visits were mostly made by female patients (70.3%) and 71.3% were for injuries due to poisoning, with another 20.3% due to cutting or piercing instruments (Table 22). For ED visits due to self-inflicted injury,

private insurance was the expected source of payment for 56.7%, with Medicaid/Medicare expected to pay for 25.7% and 12.8% of visits coded as self-pay.

Table 22. Leading causes of self-inflicted injury, Wake County children							
ages 0-17 years, ED visits 2006-2012 (n=849).							
Self-Inflicted Type Frequency Percent of Self-Inflicted Injury							
Poisoning 605							
Cutting/Piercing Instrument 172 20							
Other Specified 42 4.							
Suffocation (Hanging)	22	2.3					

#5 - Falls

Falls are the leading cause of injury related hospital discharges and ED visits for Wake County children. While Falls result in very few deaths, they account for 21.5% and 26.7% of all injury related hospital discharges and ED visits, respectively, for Wake County children in these data. Almost all of these falls are coded as unintentional (99.9%).

All 646 fall injury related hospital discharges for Wake County children ages 0-17 years during the years 2006-2011 were unintentional. Approximately 60% were for males and hospital discharges for fall related injury were fairly evenly distributed by age group, with 27% in ages 1-4 years, 28% in ages 5-9 years, and 23% in ages 10-14 years. The median charges for Fall related hospital discharges in Wake County children, 2006-2011, was \$13,773 and the median length of stay for these hospitalizations was 1 day.

Falls are responsible for over 36,000 ED visits for children in Wake County during the years 2006-2012, with an overall rate of 21.51 fall related ED visits per 1,000 person-years for 2011-2012. 58.1% of fall related ED visits are for males. Over a third (35.7%) of ED visits related to injury from falls are for the age group 1-4 years and another 27.5% are for ages 5-9 years. Over 90% of ED visits for fall related injury result in being discharged to home, with another 4.2% admitted to the hospital or transferred to another hospital. ED visits for fall related injury were slightly less likely to have Medicaid/Medicare as the expected source of payment (30.9%) than injury visits overall (32.8%) and slightly more likely to list private insurance as the source of payment (55.4% for falls, 51.2% overall). Table 23 presents specific types of Falls resulting in ED visits for Wake County children, 2006-201.Almost one in five (18.4%) of fall injury related ED visits were the result of falls from slipping, tripping or stumbling, 14.3% were due to falls resulting in striking against another object, and 8.4% were coded as falls from playground equipment.

Falls are the leading mechanism of injury reported in the Wake County EMS Pediatric Trauma Toolkit for 2011-2012, accounting for 42% of EMS attended trauma calls for patients 0-15 years. "Fall Victim" was the Dispatch Complaint for 6% of *all* EMS calls for patients 0-17 years in Wake County, 2009-2012.

Table 23. Specific types of falls, Wake County children ages 0-17						
years, ED visits, 2006-2012 (n=36,837).						
Fall Type Frequency Percent of Falls						
Slipping, Tripping, Stumbling	6,776	18.4				
Unspecified	5,456	14.8				
Fall Striking Against Other Object5,25214.						
From Playground Equipment	3,091	8.4				
From One Level to Another	2,854	7.7				
On or From Stairs/Steps	2,345	6.4				
From Bed	2,077	5.6				

#6 - Unintentional Suffocation

Unintentional suffocation resulted in 11 deaths to Wake County children during 2006-2012, making it the 5th leading cause of injury death. While Unintentional Suffocation was not a leading cause of hospitalization or ED visits, it was included on the top ten list of injury causes for Wake County children because of the high number of fatalities. Of the deaths from suffocation or other breathing threat, 55% were females and 73% were under 1 year of age.

There were 46 hospital discharges with an injury mechanism of unintentional suffocation during the years 2006-2011. Of these, 52.2% were female and 41.3% were ages 1-4 years, with another 23.9% under 1 year of age. These hospital stays resulted in a relatively low proportion (73.9%) of patients being discharged home, with another 15.2% discharge home on home healthcare support.

Of the 87 ED visits for unintentional suffocation during the years 2006-2012, 52.3% were male and 40.2% were under 1 year of age. Another 35.6% were ages 1-4 years, making 3 out of 4 children treated in the ED for suffocation under 5 years of age. Over half (51.2%) of the ED visits for unintentional suffocation resulted in admission to the hospital or transfer to another hospital; the proportion admitted or transferred is much higher than overall ED visits and may reflect the severity of these incidents. For almost half of these visits (48.4%), the expected source of payment was Medicaid/Medicare, with 3.6% expected to pay by private insurance and 11.0% coded as Self Pay.

#7 - Burns

Injury due to burns, including from fire, hot substances and objects, was a leading cause of injury related hospital discharges, accounting for 6.8% in the years 2006-2011 for Wake County children ages 0-17 years. Only 4 children died, all in building fires, in Wake County, 2006-2011. Of the 203 hospital discharges due to burn injury, 59.6% were males and 58.6% were for ages 1-4 years. While the most serious burns would likely be transferred to the regional burn center for further treatment, the vast majority (97.0%) of these hospitalized burn injuries were discharged home from the hospital. The median hospital charges reported for burn injury was \$12,525 and the median length of stay was 3 days.

Of the 1,521 burn injury related ED visits, 99.7% were coded as unintentional burns. Over half of these visits (50.2%) were for ages 1-4 years and 55% were for males. The overall rate of burn related ED visits for Wake County children, 2011-2012, was 0.84 visits per 1,000 person-years. Burn related ED visits were much more likely to be admitted to the hospital or transferred to another hospital (14.4%) than injury related ED visits overall (4.5%). Only 81.6% of burn related ED visits were discharged home. Burn related ED visits were more likely to have Medicaid/Medicare coded as the expected source of payment (44.9%) than injury ED visits overall (32.8%). Hot substances and objects accounted for 83% of burn related ED visits, with the largest sub-mechanism being other hot substances and objects (44.9%) (Table 24). Hot liquids and vapor (including steam), and hot tap water are the coded sub-mechanisms for 35.1% of burn related ED visits for Wake County children ages 0-17 years. Fires of one sort or another accounted for 10.7% of these burn injury related ED visits.

Table 24. Specific types of fire/burn injury, Wake County children ages 0-17					
years, ED visits, 2006-2012 (n=1,516).					
Fire/Burn Type	Frequency	Percent of Fire/Burns			
Other Hot Substance or Object	681	44.9			
Hot Liquid or Vapor (including steam)	416	27.4			
Hot Tap Water	117	7.7			
Caustic or Corrosive Substance	93	6.1			
Conflagration (Fire)	55	3.6			
Unspecified Fire	55	3.6			
Unspecified Hot Substance or Object	45	3.0			
Other Burning Materials	28	1.8			
Controlled Fire	26	1.7			

#8 - Struck By or Against

Unintentional injuries resulting from being struck by or striking against objects or persons, with or without subsequent falls, were the second leading injury cause for ED visits and the 5th leading injury cause of hospital discharge for Wake County children ages 0-17 years. This category includes *unintentional* injuries resulting from a variety of mechanisms, including being struck by or against another person in sports, struck by a falling object, or struck by or against furniture. These injuries can be caused by bumping into, colliding with, kicking against, stepping on, or being struck by a person or object, unintentionally. It does NOT include injury caused by a fall resulting in striking an object nor assaultive injuries due to being struck intentionally.

There were 162 hospital discharges for injury from being unintentionally struck by or against objects or persons for Wake County children during the years 2006-2011. Over 60% (62.4%) were for children ages 10-17 years and 81.5% were for males. The median reported hospital charge for discharges for struck by/against related injury was \$14,995 and the median length of stay was 2 days.

There were 25,766 ED visits due to struck by/against related injuries for children in Wake County, 2006-2012, with an overall rate of 14.61 struck by/against ED visits per 1,000 person years in 2011-2012. Over 2/3 of the ED visits for struck by/against injuries were for males (67.4%) and 10-14 year old children were the age group with the most ED visits in this category (32.9%). More than nine out of ten of these ED visits (94.1%) resulted in being discharged home, with only 1.6% admitted to a hospital. A higher proportion of these visits had an expected payment source of private insurance (56.4%) than injury ED visits overall (51.2%), while Medicaid/Medicare was expected as the source of payment for 29.0% and 9.2% were coded as self-pay (Table 25).

Table 25. Specific types of struck by/against, Wake County children ages 0-17 years, ED visits,					
2006-2012 (n=25,766).					
Struck By/Against Types	Frequency	Percent of Stuck By/Against			
Other, With or Without Fall	10,978	42.6			
In Sports, With or Without Fall	8,942	34.7			
By Other Stationary Object, With or Without Fall	2,304	8.9			
By Furniture, With or Without Fall	2,131	8.3			
By Falling Object	1,304	5.1			

The leading sub-mechanism code for this group is "Other" with no further specification of the mechanism. The second leading sub-mechanism is in sports, with or without subsequent falls, accounting for 34.7% of all struck by/against injury ED visits. In fact, struck by/against in sports, with 8,942, is the second leading specific cause of injury related ED visits for Wake County children ages 0-17 years during the years 2006-2012 at the sub-mechanism level, behind only motor vehicle traffic crash - occupants.

#9 - Natural and Environmental Factors

The injury mechanism of Natural and Environment Factors includes a variety of injury sub-mechanisms. Various animal bites (including insects, spiders, snakes, dogs), excessive heat or cold (not man-made), exposure to extreme weather (including tornado, hurricane or cataclysmic storm), and other injury caused by natural and environmental factors (e.g. lightning, toxic reactions to plants, changes in air pressure) are all part of this mechanism. There were 6 child deaths in this category in Wake County, 2006-2011; 4 were due to a cataclysmic storm, one was due to excessive heat, and the other was exposure-unspecified.

There were 144 hospital discharges for Wake County children ages 0-17 years, during the years 2006-2011, due to natural and environmental factors. Over a third (35.4%) of these were for children ages 1-4 years and 50% were males. The median length of stay for these hospitalizations was 2 days with median hospital charges of \$8,227. No further breakdown of these visits at the sub-mechanism level was possible with the data available to us.

Natural and environmental factors were responsible for 7,250 ED visits for children in Wake County, 2006-2012. Of these, 55.5% were for males and 34.5% were for children ages 1-4 years of age, with another 28.2% for ages 5-9 years. While many of these injuries do not sound serious (e.g. insect bites), 3.8% of these ED visits required admission to a hospital and many have the potential to be life threatening (Table 26). A slightly higher proportion of ED visits due to injury from natural and environmental factors had an expected source of payment of Medicaid/Medicare (37.2%) and self-pay (13.9%) than for injury related ED visits overall (32.8% and 10.9%, respectively).

Table 26. Specific types of natural/environmental factors, Wake County children ages 0- 17 years, ED visits, 2006-2012 (n=7,250)					
Natural/Environmental Factor Types Frequency Percent of Natural					
Non-Venomous Arthropods (Insects)	3,227	44.5			
Dog Bite	1,948	26.9			
Bite/Other Injury Caused by Animals (including snakes)	601	8.3			
Sting of Hornets, Wasps, Bees	459	6.3			
Venomous Spiders and Arthropods (Insects)	448	6.2			
Excessive Heat/Cold, Exposure to Weather	294	4.1			

Over 90% of ED visits for injury from natural and environmental factors involve bites, stings, and other injury from animals. Non-venomous arthropods account for 44.5% of these injuries, with stings of hornets, wasps and bees and venomous spiders and arthropods responsible for another 12.5%. Dog bites were responsible for 1,948 ED visits by Wake County children during this time period, averaging 278 such visits per year. Exposure to excessive heat or cold or extreme weather was responsible for fewer than 300 ED visits by Wake County children during this time period.

#10 - Pedal Cycle (Bicycle) Injury/Crashes

There was only one child death on a bicycle during the years 2006-2011 in Wake County and it involved a motor vehicle. We are unable to report how many hospital discharges occurred because we do not have access to the sub-mechanism codes for those data.

There were 3,007 ED visits for children in Wake County ages 0-17 years during 2006-2012 due to "Pedal Cycle" injury, which includes injuries from both bicycles and tricycles and other non-motorized pedaled vehicles. We refer to these injuries as bicycle injuries in this section. The overall rate for ED visits related to bicycle injury

for Wake County children, 2011-2012, was 1.55 ED visits per 1,000 person-years. It is important to note that these are injuries from bicycle crashes that do NOT involve a motor vehicle. Motor vehicle crashes that involve a bicycle are included in the section addressing injuries from motor vehicle crashes.

For ED visits with a code for a bicycle injury, 41.4% are for children ages 5-9 years old, another 36.8% are for ages 10-14 years old, and 12.5% are for ages 1-4 years. This probably reflects that few children under 1 year of age are exposed to this type of injury while those 15-17 years may decrease their use of bicycles as their use of motor vehicles, and their number of motor vehicle crash injuries, increases. Bicycle related injury ED visits are overwhelming for male children (70.8%). While 90.2% of these ED visits result in being discharged home, 5.5% are admitted to the hospital or transferred to another hospital. The proportion of these visits expected to be paid by private insurance is 51.5%, with 30.5% expected to be paid by Medicaid/Medicare and 11.6% coded as self-pay.

4. Other Important Cause of Childhood Injury – Poisoning

Poisoning was not one of the top 5 injury causes of death, hospitalization or ED visits for Wake County children, nor was it in the leading 10 causes of childhood injury overall. However, it is an area where we have additional data available from the Carolinas Poison Center to help us understand the extent of this issue in the community.

During the years 2006-2012, CPC handled 32,262 exposure calls for children ages 0-17 years who were residents of Wake County. 99.0% of these calls were for acute exposures and 92.1% were exposed through ingestion. More than 3 out of 4 of these calls (77.8%, 25,110) were classified as "Unintentional - General", while only 3.0% (952) were classified as "Intentional – Suspected Suicide." The majority of these calls were related to exposures in children 1-4 years of age (68.1%) and, overall, 52.5% were for males. Males accounted for over 50% of the calls in all age groups except ages 15-17 years, when 57.5% of the calls were for females. Most calls were made from the child's own residence (83.2%), while 8.3% were made from a healthcare facility.

The most common substance group for exposures by Wake County children was "Cosmetics/Personal Care Products" (11.4%), followed by "Analgesics" (10.4%) and "Cleaning Substances (Household)" (7.3%). "Analgesics" was either the top or second leading substance group for every age group, ranging from 10.1% of exposures for children under 1 year of age to 21.4% of exposures for those ages 15-17 years. "Cosmetics/Personal Care Products" are the leading cause for ages 1-4 years (13.7%) and are one of the top 10 substance groups for all age groups under 15 years of age. The top 10 substance groups account for well over 50% of exposures in all age groups.

Fewer than 1 in 4 calls report a clinical effect of the exposure (22.5%), but of those, many have more than one clinical effect reported. The most common clinical effect category is "Gastro", reported for 11.8% of all calls but for over half (51.4%) of calls with a reported clinical effect. The most common *specific* clinical effect reported was "Gastro-Vomiting", reported for 24.3% of those with clinical effects. The specific effect "Neuro-Drowsy-Lethargy" was reported for 17.7% of those with a clinical effect, followed by "Cardio-Tachycardia" for 13.1% and "Ocular–Irritation-Pain" for 12.7%.

Most of these calls had no or very minor medical outcomes. Those reported as not followed due to nontoxic exposure of minimal clinical effect possible, no effect, minor effect, or unrelated effect accounted for 94.8% of the calls for Wake County children. Nonetheless, over 1,400 calls were for exposures resulting in moderate or major medical effects or death, or deemed potentially toxic but the CPC was unable to follow the patient.

During the years 2006-2011, only 3 Wake County children died from unintentional poisoning, all of them 15-17 years of age and from narcotics overdoses. During the same years, 157 (5.2%) hospital discharges were made for Wake County children 0-17 years of age for unintentional poisoning. This compared to 195 hospital discharges during this time for self-inflicted poisoning, which accounted for 71.7% of all self inflicted injury hospital discharges. While the median length of stay for self-inflicted poisoning was 3 days, it was only 1 day for unintentional poisoning.

For the years 2006-2012, there were 2,142 ED visits for children in Wake County for unintentional poisoning (1.6% of all ED injury related visits). Of these, 55.1% were for ages 1-4 years and 13.7% were for ages 15-17 years; 55.2% of the visits were for males. While most (84.0%) of ED visits for unintentional poisoning resulted in being discharged home, 12.7% of these visits were either admitted or transferred to another hospital, compared to 4.5% of injury related ED visits overall. A higher proportion of these visits were expected to be paid by Medicaid/Medicare (41.8%) and a lower proportion by private insurance (40.6%) than those overall but the same proportion was coded as self-pay (10.9%). As with the hospital discharge data, ED visits for self-inflected poisoning looked very different from those for unintentional poisoning. Of the 605 ED visits for self-inflicted poisoning, 72.9% were for females, 73.7% were for the age group 15-17 years and 26.0% were for ages 10-14 years. Over three-quarters of the ED visits for self-inflicted poisoning resulted in admission or transfer to another hospital (77.9%), with only 16.3% of these visits being discharged home. A lower proportion of ED visits for self-inflicted poisoning were expected to be paid for by Medicaid/Medicare (23.0%) and a higher proportion by private insurance (55.4%) and self-pay (13.2%) than for unintentional poisoning visits.

C. Survey of Wake County Organizations Addressing Childhood Health and Safety

A total of 110 organizations participated in the John Rex Endowment Wake County Childhood Health and Safety Profile Survey (Response Rate=71%). Nine of the 110 organizations (9%) declined to have their organization identified in public reports; however their information is included in the summary of responses. The vast majority (99%) indicated a preference for ongoing and upcoming announcements from the John Rex Endowment.

The survey assessing Wake County Organizations Addressing Childhood Health and Safety included three categories of questions that assessed: 1) Organizational Demographics and Outreach; 2) Injury Prevention Focus of Organizations; and 3) Organizational Resources. Sub-sections C1-3 provide highlights of the survey results by these three categories. Detailed summary tables for all survey questions are included in Appendix L. Sub-Section C-4 provides a summary of estimated organization capacity and program impact.

1. Organizational Demographics and Outreach

a. Organization Type

Half (50%) of the responding organizations were small, with fewer than 10 full-time employees (Table L-1, Appendix L). Approximately one third (34%) were medium size; and 16% were large, with 50 or more employees (Table L-1, Appendix L). The median number of employees is 16 and the median number of full time employees is 10.5. Most (88%) of participating organizations reported having volunteers with a median of 24 volunteers.

Participating organizations were asked to identify what type(s) of entity(ies) best describe their organization. Almost three quarters (74%) of organizations selected 'non-profit' as their entity type, with another 18% being state or local government agency (TablesL-3, L-4 and L-5 Appendix L).

b. Geographical Service Areas

Organizations were asked to identify their geographical service areas; the majority of organizations selected Wake County, followed in descending order by the Greater Triangle Area, The City of Raleigh, The State of North Carolina and lastly, The United States (Table L-6). Half of the organizations (50%) selected only one area in which they were working (Table L-7).

c. Target Populations

Organizations were asked to identify whether they specifically targeted selected populations. Over half of the organizations indicated specifically targeting (from highest to lowest): low income (72%); African-American (52%); and Hispanic (51%); populations (Table 27, and Table L-8 in Appendix L). Organizations reported targeting (from lowest) refugees (13%), LGBT (18%), orphans (19%), and American Indians (28%) the least.

Table 27. Frequencies of organizations targeting specific populations (n=110). ^a				
Population	Organizations that indicated targeting population			
Population	N	%		
Ethnicity				
African American	57	52%		
American Indian	31	28%		
Caucasian	45	41%		
Hispanic	56	51%		
Other ethnicities ^b	14	13%		
Sex				
Female	47	43%		
Male	46	42%		
Geography				
Rural	49	45%		
Urban	54	49%		
Other Groups				
Low income	79	72%		
Homeless	50	45%		
Children/youth living with a disability	47	43%		
Foster Children	38	35%		
Orphans	21	19%		
LGBT	20	18%		
Other ^c	18	16%		
Refugees	14	13%		

^aCategories are not mutually exclusive.

^bOther ethnicities include: African, Arabic, Asians, mixed races, Indian and Russian.

^cOther Table L-8 in Appendix L

Organizations identified different types of population groups that their organization interacted with, including over half working directly with Children (85%), Parents/caregivers (78%), Teachers (67%), Policy Makers/ Decision Makers (64%), and medical professionals (58%) (Table 28, also in L-9 Appendix L). The majority of organizations identified working with four or more groups (Table L-9, Appendix L).

Table 28. Groups of people with which organizations work. ^a				
Groups	N	%		
Children	93	85%		
Parents/Caregivers	86	78%		
Teachers	74	67%		
Policy Makers/Decision Makers	70	64%		
Medical Professionals (e.g. doctors, nurses, EMT)	64	58%		
Public Safety (e.g. police, fire)	51	46%		
Religious Leaders	44	40%		
Other ^b	28	25%		

^{*a}</sup> Categories are not mutually exclusive*</sup>

^bOther Table L-9 in Appendix L

2. Injury Prevention Focus of Organizations

Participants were asked to identify the level of importance relative to nine focus areas of their organizations. About half of the organizations identified education (71%), funding (55%), advocacy (54%) and program evaluation (49%) as very important to their work (Table 29, also in L-11 Appendix L).

Table 29. Level of organization importance relative to nine work focus areas.							
Work Focus Area	Somewhat Important (4)			Important (5)	Very	Very Important (6)	
WORK FOCUS AREU	N	%	N	%	N	%	
Education (n=109)	4	4%	21	19%	77	71%	
Funding (n=109)	12	11%	18	17%	60	55%	
Advocacy (n=109)	6	6%	26	24%	59	54%	
Program Evaluation (n=109)	9	8%	30	28%	53	49%	
Other ^a (n=41)	1	1%	1	1%	39	36%	
Counseling (n=109)	10	9%	27	25%	36	33%	
Research/Data (n=109)	10	9%	44	40%	34	31%	
Communication/Media (n=109)	15	14%	40	37%	34	31%	
Writing Rules or Policies (n=109)	21	19%	35	32%	19	17%	

^aOther types of focus included 48.8% Direct Services and 26.8% Community/Organizational Capacity; Table L-11 in Appendix L

Organizations were asked to rate how important childhood injury and violence prevention is to their organizational focus on a seven point scale of not at all important to extremely important. Almost all organizations (88%) indicated that childhood injury and/or violence prevention was somewhat to extremely important (Table L-11, Appendix L).

Each organization identified relevant types of injury or events related to their work focus. More than half (52%) of the organizations work in both intentional and unintentional injuries and events (Table 30). Almost one third (31%) work only in intentional injuries or events, and a minority work only in unintentional (11%). A few (6%) of the organizations who completed the survey indicated that they do not specifically work in intentional or unintentional injuries or events. Additional analysis of organizations that identified working in individual injury event categories were conducted, including the categories by injury types. A detailed summary is provided in Appendix M.

Table 30. Category of injury focus of organizations by order.				
Organizations by Injury Type N				
Both Intentional and Unintentional	56	52%		
Intentional Only	33	31%		
Unintentional Only	12	11%		
Neither	6	6%		
Total	107	100%		

Tables 31 and 32 detail the organizations who identified working in an injury type by category.

Table 31. Organizations with focus on intentional injury. ^a				
Injury Type by Category	N	%		
Child Abuse/ Maltreatment (physical, sexual, emotional)	71	66%		
Assault/Physical Violence	62	57%		
Bullying	61	56%		
Sexual Violence (e.g. assault, rape)	51	47%		
Self Inflicted/Self Harm	50	46%		
Human trafficking	17	16%		
Other ^b	17	16%		
None of the above	18	17%		
Total Intentional	108	100%		

^aCategories are not mutually exclusive. ^b Other Table L-14 in Appendix L

Table 32. Organizations with focus on unintentional injury. ^a				
Injury Type by Category	N	%		
All Motor Vehicles	44	41%		
Cars/trucks/buses	38	36%		
Pedestrians	30	28%		
Bicycles	29	27%		
Motorcycles	19	18%		
Other MVC	2	2%		
None of the above	39	36%		
Poisoning/overdose	27	25%		
Bicycle injury/crashes (NOT involving a motor vehicle)	25	23%		
Falls	25	23%		
Environmental Factors (e.g. weather related)	24	22%		
Firearm	20	19%		
Other ^b	19	18%		
Drowning/submersion	17	16%		
Burns, including fire and scalds	15	14%		
Suffocation	12	11%		
Animal bites	11	10%		
Total Unintentional Respondents	107	100%		

^aCategories are not mutually exclusive. ^bOther Table L-14 in Appendix L

3. Organizational Resources

a. Organizational Capacity

Organizations reported their abilities to identify resources (e.g. locate evidence based practices; find childhood injury data; identify funding sources; and identify other local childhood injury and/or violence prevention networks) and integrate resources (e.g. use evidence based practices in injury prevention programs; use childhood injury data; obtain funding; and use existing local childhood injury and/or violence prevention network).

Respondents self-reported their capacity using a four point scale from high level of capacity to no capacity. Obtaining funding, identifying funding, researching evidence based programs and finding relevant data sources received the lowest scores for organizational capacity (Table 33, and in L-18 Appendix L). Using research about evidence based programs, identifying and using Wake County injury and/or violence networks, and using data for program planning and implementation received the highest scores.

Table 33. Organizational capacity to perform selected activities.						
	Self Reported		Self Reported		Self Reported	
Activities	High Level		Medium Level		Low Level	
	of Capacity		of Capacity		of Capacity	
	N	%	Ν	%	Ν	%
To Identify Specific Resources						
Find relevant childhood injury data for prioritizing	22	21 20/	20	20 00/	70	26.0%
program development and planning (n=104)	22	21.270	50	20.0%	20	26.9%
Research and identify evidence-based injury						
prevention programs, interventions, and strategies	24	23.3%	25	24.3%	26	25.2%
(n=103)						
Identify possible funding (n=104)	14	13.5%	36	34.6%	31	29.8%
Identify Wake County IVP entities (n=104)	33	31.7%	38	36.5%	21	20.2%
To Integrate Specific Resources						
Use research about evidence-based injury prevention						
programs, in program development and planning	44	42.3%	30	28.8%	13	12.5%
(n=104)						
Use existing Wake County IVP networks to strengthen	20	20 10/	11	40.20/	17	16 70/
efforts within organization (n=102)	50	29.4%	41	40.2%	17	10.7%
Use childhood injury data for prioritizing program	27	26 5%	20	20 1%	22	22 50/
development and planning (n=102)	27	20.5%	50	29.4%	25	22.5%
Obtain funding (n=104)	13	12.5%	35	33.7%	29	27.9%

b. Data Sources

Survey respondents were asked to identify data sources used by their organization. Over half of the organizations identified using at least one source of national level data (66%), North Carolina state level data (70.9%) and Wake County level data (57.3%) (Table L-18). Over half (56%) of the organizations identified using four or more data sources. The data sources used most frequently were NC Division of Public Health (including the State Center for Health Statistics) (63.1%) and the Center for Disease Control and Prevention (59.2%). Only a small percentage (9.7%) reported not using data at their organization. Organizations who identified working in Burns reported using the greatest average of data sources (7.2), and organizations who identified working in sexual violence reported the lowest average of data resources (3.9) (Table M-8, Appendix M).

c. Funding Sources

Survey respondents were asked to identify the types of funding they received. The most common funding was received from private donors (43.1%) followed by NC funding Sources, such as North Carolina Foundations (John Rex Endowment, Kate B. Reynolds, The Duke Foundation) (36.3%), and the North Carolina Department of Health and Human Services (27.5%) (Table L-20). Most organizations (45%) identified receiving one to three funding sources and several organizations (22%) indicated that they did not receive funding from external sources (Table Q21b). Organizations who identified working in Human Trafficking reported the greatest average of funding sources (5.1) and organizations who identified as working in Motorcycles reported the lowest average of funding sources (2.7) (Table M-7, Appendix M).

d. Capacity Building Activities

Survey respondents were asked to rate on a four point scale how valuable specific capacity building activities are to their organizational work. The majority (81.2%) of organizations rated receiving resources related to childhood injury and violence prevention as very or somewhat valuable (Table 34, and in L-23 Appendix L). The majority also responded that networking with Wake County stakeholders (77.2%), receiving Wake County data reports (76.2%) and participating in information networking sessions (76.2%) were very or somewhat valuable.

Table 34. Organization respondent estimate of value of capacity building activities.										
Activities	3 - Somewh	at Valuable	4 - Very	Valuable						
Activities	N	%	N	%						
Participate in informational networking sessions										
for identifying public and private funders	20	19.8%	57	56.4%						
(n=101)										
Receive Wake County childhood IVP resources	27	21 7%	50	10 5%						
(n=101)	52	51.776	50	49.5%						
Network with Wake County childhood IVP	20	28.7%	19	18 5%						
stakeholders (n=101)		20.770		40.576						
Attend trainings focused on building capacity in	26	25 7%	46	45 5%						
resource development (n=101)		23.770		43.370						
Receive Wake County childhood injury data	33	32 7%	44	43.6%						
reports (n=101)		52.770		43.070						
Attend trainings on evidence-based programs,	31	30.7%	АЛ	43.6%						
interventions, and strategies (n=101)	51	50.770		+3.070						

4. Organization Characteristics by Organizational Capacity Levels

This section highlights results from the organizational capacity and estimated program impact analysis. Detailed summary tables are included in Appendix L. The majority of organizations (N=98 organizations), received a "capacity" index score based on self-reported responses to the survey. Some organizations (N = 12 organizations) did not complete the question correlating to the capacity index and therefore did not receive a capacity index score. The capacity index, ranging from a low of eight to a high of 32, was divided into three equal categories based on the frequency distribution. Categories were divided into High Capacity (greater than or equal to twenty-five), Medium Capacity (less than 25 and greater than or equal to 21) and Low Capacity (less than 21). Indicators for the organizational capacity sub groups were reviewed and we reported differences greater than 10% from the overall average.

a. Organizational Demographics and Outreach

High Capacity organizations reported the highest median for number of employees (29) and for number of full time employees (26). Low capacity organizations reported the lowest numbers for employees (12) and full time employees (6); however they reported the highest number of volunteers (45) (Table 35).

Table 35. Median staff and volunteers by organizational capacity level.											
	All Organizations	High Capacity	Medium Capacity	Low Capacity							
Employees	16	29	13	12							
Full Time Employees	11	26	8	6							
Volunteers	24	11	26	45							

Organization Type by Organizational Capacity Level. High Capacity organizations were more likely to identify as state government entities (21%), less likely to identify as a non-profit (59%) and were the only organizations that identified as research/data organizations (2%) (Table 36). Medium Capacity organizations were more likely to identify as a non-profit (88%).

Table 36. Organization types respondents identified by organizational capacity level.											
Organization Types	All Orgai	All Organizations		apacity ^b	Med Co	apacity ^c	Low Capacity ^d				
Organization types	N	%	N	%	N	%	N	%			
Non-profit	81	74%	19	58%	29	88%	24	75%			
Other ^b	16	15%	5	15%	3	9%	8	25%			
State Government	12	11%	7	21%	1	3%	3	9%			
Private	11	10%	2	6%	3	9%	5	16%			
Local Government	8	7%	3	9%	2	6%	2	6%			
Volunteer Organization	6	5%	2	6%	1	3%	3	9%			
Hospital/Health Center	4	4%	1	3%	1	3%	1	3%			
Religious Organization	4	4%	0	0%	1	3%	3	9%			
Research	2	2%	2	6%	0	0%	0	0%			
Committee/Task Force	0	0%	0	0%	0	0%	0	0%			

^aCategories are not mutually exclusive. ^cMedium Capacity Organizations N= 33 with 76 programs. ^dLow Capacity Organizations N= 32 with 46 programs

Geographically Served Areas by Organizational Capacity Level. Medium Capacity organizations were more likely (82%) to select the Wake County as their geographical area of service and less likely to select the Greater Triangle Area (33%) and the State of North Carolina (33%) (Table 37).

Table 37. Distribution of geographic service areas by organizational capacity level. ^a										
Area	All Organizations		High Capacity ^b		Med Capacity ^c		Low Capacity ^d			
	N	%	N	%	N	%	N	%		
The City of Raleigh	47	43%	16	48%	15	45%	13	41%		
Wake County	77	70%	24	73%	27	27 82%		63%		
The Greater Triangle Area	48	44%	20	61%	11	33%	15	47%		
The State of North Carolina	47	43%	15	45%	11	33%	13	41%		
Nationally, The United States	14	13%	7	21%	3	9%	3	9%		
Other (e.g. neighborhoods, cities, towns) ^e	7	6%	3	9%	3	9%	1	3%		
Average	2.2		2.6		2.1		2.0			

^{*a}Categories are not mutually exclusive.*</sup>

^bHigh Capacity Organizations N= 33 with 110 programs

^cMedium Capacity Organizations N= 33 with 76 programs

^dLow Capacity Organizations N= 32 with 46 programs

^eOther: A Regional focus of 6+ counties was included for six (5%) organizations; International research organizations marked by one (1%) organization, Table L-6 in Appendix L

Target Populations by Organizational Capacity Level. High Capacity organizations were more likely to be working with several populations groups (Table 38), including: American Indian (48.5%), Hispanic (66.7%), females (54.5%), LGBT (33.3%), Rural (63.6%), and Urban (66.7%) populations. Medium Capacity organizations were less likely to target LGBT (3.0%) populations. Low Capacity organizations were less likely to target LGBT (3.0%) and Urban (34.4%) populations.

Table 38. Frequencies of organizations targeting specific populations by organizational capacity.											
	All Organ	izations	High Co	apacity ^b	Med Co	apacity ^c	Low Capacity ^d				
Population	Total Responses N= 110	%	N=33	%	N=33	%	N=32	%			
African American	57	52%	20	60.6%	18	54.5%	15	46.9%			
American Indian	31	28%	16	48.5%	7	21.2%	6	18.8%			
Caucasian	45	41%	16	48.5%	14	42.4%	12	37.5%			
Hispanic	56	51%	22	66.7%	19	57.6%	12	37.5%			
Other ethnicities	14	13%	6	18.2%	4	12.1%	3	9.4%			
Female	47	43%	18	54.5%	13	39.4%	12	37.5%			
Male	46	42%	14	42.4%	16	48.5%	11	34.4%			
LGBT	20	18%	11	33.3%	1	3.0%	6	18.8%			
Rural	49	45%	21	63.6%	15	45.5%	7	21.9%			
Urban	54	49%	22	66.7%	16	48.5%	11	34.4%			
Homeless	50	45%	16	48.5%	16	48.5%	15	46.9%			
Low income	79	72%	27	81.8%	24	72.7%	21	65.6%			
Foster Children	38	35%	13	39.4%	12	36.4%	12	37.5%			
Orphans	21	19%	9	27.3%	3	9.1%	9	28.1%			
Children/youth											
living with a disability	47	43%	14	42.4%	16	48.5%	13	40.6%			
Refugees	14	13%	5	15.2%	4	12.1%	4	12.5%			
Other ^e	18	16%	4	12.1%	7	21.2%	7	21.9%			

^aCategories are not mutually exclusive

^bHigh Capacity Organizations N=33 with 110 programs

^cMedium Capacity Organizations N= 33 with 76 programs ^dLow Capacity Organizations N= 32 with 46 programs ^eTable L-8 in Appendix L

High Capacity organizations are more likely to work with Public Safety professionals (64%) than other organizations (Table 39). Low Capacity organizations are less likely to work with Teachers (56%), Medical Professionals (47%), and Public Safety professionals (31%) than other organizations.

Table 39. Groups of people with which respondents work by organizational capacity level. ^a										
	A	.11	Hi	gh į	М	ed	Lo	W		
Groups	Organi	zations	Сарс	ncity [₽]	Сарс	rcity ^c	Capacity ^d			
	N	%	N	%	N	%	N	%		
Children	93	85%	28	85%	30	91%	26	81%		
Parents/Caregivers	86	78%	27	82%	28	85%	24	75%		
Teachers	74	67%	25	76%	23	70%	18	56%		
Policy Makers/Decision Makers	70	64%	21	64%	23	70%	18	56%		
Medical Professionals (e.g. doctors, nurses, EMT)	64	58%	22	67%	19	58%	15	47%		
Public Safety (e.g. police, fire)	51	46%	21	64%	15	45%	10	31%		
Religious Leaders	44	40%	16	48%	12	36%	11	34%		
Other ^e	28	25%	8	24%	5	15%	12	38%		

^aCategories are not mutually exclusive. ^bHigh (

^bHigh Capacity Organizations N= 33 with 110 programs

^cMedium Capacity Organizations N= 33 with 76 programs ^dLow Capacity Organizations N= 32 with 46 programs ^eTable L-9 In Appendix L

b. Injury Prevention Focus of Organizations

Organizational Work Focus by Organizational Capacity Level. High Capacity organizations were more likely to report Program Evaluation (64%), Research/Data (42%) and Communication/Media (45%) as very important to their organizational work focus (Table 40). Medium Capacity organizations were less likely to report counseling as very important (21%), compared to Low Capacity who were more likely to report counseling as very important (47%). Low Capacity organizations were less likely to report program evaluation as important (38%).

Table 40. Organization work focus very important (6) by organizational capacity level.											
Focus	All Organi	zations	High C	apacity ^a	Med 0	Capacity ^b	Low Capacity ^c				
FOCUS	N	%	N	%	N	%	N	%			
Education	77	71%	25	76%	24	73%	21	66%			
Funding	60	55%	21	64%	17	52%	17	53%			
Advocacy	59	54%	18	55%	15	45%	18	56%			
Program Evaluation	53	49%	21	64%	16	48%	12	38%			
Other ^d	39	36%	11	33%	14	42%	11	34%			
Counseling	36	33%	12	36%	7	21%	15	47%			
Research/Data	34	31%	14	42%	10	30%	7	22%			
Communication/Media	34	31%	15	45%	9	27%	7	22%			
Writing Rules or Policies	19	17%	6	18%	5	15%	6	19%			

^aHigh Capacity Organizations N= 33 with 110 programs ^cLow Capacity Organizations N= 32 with 46 programs ^bMedium Capacity Organizations N= 33 with 76 programs ^dOther Table L-11 in Appendix L

Organizational Injury Focus by Organizational Capacity Level. High Capacity organizations were more likely to work in Child Abuse/Maltreatment (79%), Self Inflicted/Self Harm (61%), and Firearms (30%), than other organizations (Table 41). Medium Capacity organizations were less likely to work in Sexual Violence (33%) and Self-Inflicted/Self Harm (33%). Low Capacity organizations were less likely to work in Poisoning/overdose (13%) and Bicycle injury/crashes (not involving a MVC (13%). Low Capacity organizations were more likely to identify as <u>not</u> working in any of the listed unintentional injuries provided in the survey (44%).

Table 41. Identification of organizations working in injury type(s) by organizational capacity level.											
	A	//	Hi	gh	М	ed	Low Co	nacity ^c			
Injury Type	Organi	Organizations		ncity ^a	Сарс	ncity ^b					
	N	%	N	%	N	%	N	%			
Intentional											
Child Abuse/ Maltreatment (physical, sexual,											
emotional)	71	66%	26	79%	18	55%	22	69%			
Assault/Physical Violence	62	57%	22	67%	18	55%	17	53%			
Bullying	61	56%	20	61%	20	61%	16	50%			
Sexual Violence (e.g. assault, rape)	51	47%	18	55%	11	33%	18	56%			
Self Inflicted/Self Harm	50	46%	20	61%	11	33%	15	47%			
Human trafficking	17	16%	8	24%	5	15%	4	13%			
Other ^d	17	16%	3	9%	11	33%	3	9%			
None of the above	18	17%	3	9%	5	15%	4	13%			
Total Intentional	108	100%	33	100%	33	100%	32	100%			

Table 41. Identification of organizations working in inj	ury type(s) by org	anizatio	nal capac	ity level.			
Injury Type	All Organizations		High Capacity ^a		Med Capacity ^b		Low Ca	pacity ^c
	N	%	N	%	N	%	N	%
Unintentional								
All Motor Vehicles	44	41%	15	45%	11	33%	11	34%
Cars/trucks/buses	38	36%	15	45%	9	27%	9	28%
Pedestrians	30	28%	12	36%	9	27%	6	19%
Bicycles	29	27%	11	33%	8	24%	6	19%
Motorcycles	19	18%	7	21%	5	15%	5	16%
Other MVC ^e	2	2%	1	3%	1	3%	0	0%
None of the above	39	36%	10	30%	9	27%	14	44%
Poisoning/overdose	27	25%	11	33%	10	30%	4	13%
Bicycle injury/crashes (NOT involving a motor								
vehicle)	25	23%	8	24%	10	30%	4	13%
Falls	25	23%	9	27%	9	27%	6	19%
Environmental Factors (e.g. weather related)	24	22%	9	27%	11	33%	4	13%
Firearm	20	19%	10	30%	8	24%	2	6%
Other ^f	19	18%	6	18%	8	24%	4	13%
Drowning/submersion	17	16%	7	21%	6	18%	3	9%
Burns, including fire and scalds	15	14%	6	18%	6	18%	3	9%
Suffocation	12	11%	6	18%	3	9%	2	6%
Animal bites	11	10%	4	12%	4	12%	2	6%
Total Unintentional Respondents	107	100%	33	100%	33	100%	32	100%

^aHigh Capacity Organizations N= 33 with 110 programs ^cLow Capacity Organizations N= 32 with 46 programs ^bMedium Capacity Organizations N= 33 with 76 programs ^{def}Table L-14 in Appendix L

Importance of Childhood Injury and/or Violence Injury Focus to Organization by Organizational Capacity Level. Almost all (87%) of the High Capacity organizations reported Childhood Injury and Violence Prevention as "Very Important" or "Extremely Important" to their organizational work focus, compared to Medium Capacity (69%) and Low Capacity (35%) (Table 42). Almost one fifth (18%) of Low Capacity organizations reported Childhood Injury and Violence Prevention as "Very Unimportant", "Somewhat unimportant" or "Neither Important nor Unimportant" to their organizational work focus.

Table 42. Importance of focus on preventing childhood injury and prevention to respondents by organizational capacity level.

Category		All Organizations		High Capacity ^a		apacity ^b	Low Capacity ^c	
	N	%	N	%	N	%	N	%
1 - Not at all Important	0	0%	0	0%	0	0%	0	0%
2 - Very Unimportant	4	4%	1	3%	0	0%	1	3%
3 - Somewhat Unimportant	3	3%	0	0%	0	0%	3	9%
4 - Neither Important nor Unimportant	6	6%	1	3%	1	3%	2	6%
5 - Somewhat Important	29	27%	2	6%	9	27%	15	47%
6 - Very Important	32	29%	14	42%	10	30%	6	19%
7 - Extremely Important	35	32%	15	45%	13	39%	5	16%
Average Importance	5.7		6.2		6.1		5.2	

^aHigh Capacity Organizations N=33 with 110 programs ^cLow Capacity Organizations N=32 with 46 programs ^bMedium Capacity Organizations N= 33 with 76 programs

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c. Organizational Resources by Organizational Capacity Level

Data Sources by Organizational Capacity Level. High Capacity organizations were more likely to use all levels of data in some capacity (Table 43); National level (84.4%), North Carolina level (87.5%) and Wake County level (71.9%), in contrast to Low Capacity organizations who were less likely to use data at these levels; National level (53.1%), North Carolina level (56.3%), Wake County level (43.8%). Almost one fifth (18.8%) of Low Capacity organizations reported not using data.

Table 43. Identified data sources by organization	onal capad	city level.	a					
Data Source	A Organi	ll zations	High Capacity ^b		Med Capacity ^c		Low Capacity ^d	
	N	%	N	%	N	%	N	%
Do not use data	10	9.7%	1	3.1%	1	3.0%	6	18.8%
National Level	68	66.0%	27	84.4%	22	66.7%	17	53.1%
Center for Disease Control and Prevention (CDC)	61	59.2%	25	78.1%	20	60.6%	12	37.5%
Kids Count Data Center	36	35.0%	15	46.9%	8	24.2%	12	37.5%
North Carolina State Level	73	70.9%	28	87.5%	25	75.8%	18	56.3%
NC Division of Public Health (including the State Center for Health Statistics)	65	63.1%	22	68.8%	23	69.7%	16	50.0%
UNC Injury Prevention Research Center	26	25.2%	14	43.8%	5	15.2%	7	21.9%
UNC Highway Safety Research Center	25	24.3%	11	34.4%	6	18.2%	7	21.9%
NC Department of Transportation	23	22.3%	9	28.1%	7	21.2%	6	18.8%
Carolinas Poison Control	18	17.5%	7	21.9%	6	18.2%	3	9.4%
NC Violent Death Reporting System	15	14.6%	6	18.8%	3	9.1%	5	15.6%
NC DETECT	10	9.7%	5	15.6%	3	9.1%	1	3.1%
Emergency Medical Service Performance Improvement Center (EMSPIC)	8	7.8%	5	15.6%	1	3.0%	1	3.1%
Wake County Level	59	57.3%	23	71.9%	23	69.7%	14	43.8%
Wake County Community Health Assessment	46	44.7%	16	50.0%	16	48.5%	13	40.6%
Wake County Safe Kids	44	42.7%	19	59.4%	14	42.4%	10	31.3%
Other ^e	44	42.7%	16	50%	19	57.5%	8	25%
Total Respondents	103		32	n/a	33	n/a	32	n/a

^aCategories are not mutually exclusive ^bHigh Capacity Organizations N= 33 with 110 programs ^cMedium Capacity Organizations N= 33 with 76 programs ^eTable L-19 in Appendix L

Funding Sources by Organizational Capacity Level. High Capacity organizations were more likely to receive funding from each funding source listed in Table 44: National sources (56%); North Carolina sources (65.6%); and Wake County sources (28.1%). Whereas, Low Capacity organizations were less likely to receive funding from North Carolina sources (32.3%) and Wake County sources (6.5%).

Table 44. Funding resources received by organi	zations	by organiza	tional cap	acity leve	el. ^a			
Funding Sources	Orga	All inizations	High Co	apacity ^b	Med C	Capacity ^c	L Cap	ow acity ^d
	N	%	N	%	N	%	N	%
National Funding Sources	33	32%	18	56%	8	24%	7	23%
Federal Block Grant	13	12.7%	8	25.0%	2	6.1%	3	9.7%
Department of Justice, Office of Juvenile Justice and Delinquency Prevention (OJJDP)	12	11.8%	5	15.6%	4	12.1%	3	9.7%
National Foundations (The Robert Wood Johnson Foundation, Ford Foundation, Kaiser Permanente, etc)	12	11.8%	8	25.0%	1	3.0%	3	9.7%
Centers for Disease Control and Prevention (CDC)	9	8.8%	7	21.9%	1	3.0%	1	3.2%
National Highway Traffic Safety Administration (NHTSA)	8	7.8%	4	12.5%	1	3.0%	3	9.7%
Health Resources and Services Administration's (HRSA) Maternal and Child Health Bureau	6	5.9%	4	12.5%	1	3.0%	1	3.2%
North Carolina Funding Sources	48	47.1%	21	65.6%	18	54.5%	10	32.3%
North Carolina Foundations (John Rex Endowment, Kate B. Reynolds, The Duke Foundation)	37	36.3%	17	53.1%	14	42.4%	6	19.4%
North Carolina Department of Health and Human Services (NC DHHS)	28	27.5%	16	50.0%	8	24.2%	4	12.9%
North Carolina State Budget Allocation	12	11.8%	9	28.1%	2	6.1%	1	3.2%
Wake County Funding Sources	21	20.6%	9	28.1%	10	30.3%	2	6.5%
Wake County Department of Human Services	21	20.6%	8	25.0%	10	30.3%	2	6.5%
Wake County Cooperative Extension	3	2.9%	1	3.1%	0	0.0%	1	3.2%
Wake County Department of Justice	3	2.9%	2	6.3%	0	0.0%	1	3.2%
Private Donors	44	43.1%	15	46.9%	16	48.5%	12	38.7%
Corporate Sponsors	23	22.5%	9	28.1%	10	30.3%	4	12.9%
Other Government Funding (federal, state, or local)	20	19.6%	10	31.3%	7	21.2%	3	9.7%
Insurance Companies	13	12.7%	8	25.0%	3	9.1%	2	6.5%
Other Funding Sources ^e	34	33.3%	14	43.8%	13	39.4%	7	22.5%
None of the above	22	21.6%	4	12.5%	6	18.2%	8	25.8%
Total Respondents	102		32	n/a	33	n/a	31	n/a

^aCategories are not mutually exclusive ^bHigh Capacity Organizations N= 33 with 110 programs ^cMedium Capacity Organizations N= 33 with 76 programs ^eTable L-21 in Appendix L

Capacity Building Activities by Organizational Capacity. Among six separate capacity supporting activities that JRE could offer to organizations working to provide injury and/or violence prevention, High Capacity organizations identified their leading activities as: 1) Network with Wake County childhood IVP stakeholders (68.8%); and 2) Participate in informational networking sessions for identifying public and private funders (68.8%) (Table 45). Medium Capacity organizations identified their leading activities as: 1) Receive Wake County childhood IVP resources (66.7%); and 2) Participate in informational networking sessions for identifying public and private funders (72.7%). Low Capacity organizations identified their leading activities as: 1) Receive Wake County childhood IVP resources (36.7%); and 2) Receive Wake County childhood

Table 45."Very Valuable" capacity building activities by organizational capacity level.										
Activities	All Organizations		High Co	ipacity ^ª	Medium	Capacity ^b	Low Capacity ^c			
Activities	N = 110	%	N = 32	%	N = 33	%	N = 30	%		
Participate in informational networking sessions for identifying public and private funders	57	56.4%	22	68.8%	24	72.7%	10	33.3%		
Receive Wake County childhood IVP resources	50	49.5%	16	50.0%	22	66.7%	11	36.7%		
Network with Wake County childhood IVP stakeholders	49	48.5%	22	68.8%	19	57.6%	8	26.7%		
Attend trainings focused on building capacity in resource development	46	45.5%	18	56.3%	19	57.6%	8	26.7%		
Receive Wake County childhood injury data reports	44	43.6%	16	50.0%	17	51.5%	11	36.7%		
Attend trainings on evidence- based programs, interventions, and strategies	44	43.6%	16	50.0%	20	60.6%	8	26.7%		

^aHigh Capacity Organizations N= 33 with 110 programs ^bMedium Capacity Organizations N= 33 with 76 programs ^cLow Capacity Organizations N= 32 with 46 programs

5. Program Descriptors Based on Frameworks

UNC coded all programs (N=243) for leading injury and violence prevention frameworks, including 1) Injury Prevention focus; 2) Prevention level; 3) Socio-ecological Framework; 4) Frieden's Health Impact Pyramid; and 5) Three E's of Injury Prevention. This section describes the programs by the indicators associated with the selected frameworks (Table 46). An in-depth summary was completed for these descriptors (Appendix N).

Intent: Almost half (45%) of the programs were focused on preventing intentional events or injuries. Almost a quarter (23%) were focused on preventing unintentional events or injuries. About one third (32%) of the programs address both intentional and unintentional events.

Prevention Level: Almost two thirds of programs (69%) were identified as addressing Primary Prevention causes and or activities. A small percentage of programs (11%) addressed tertiary prevention causes and/or activities or any combination of two or more prevention levels (15%) (e.g. primary and tertiary). Some (5%) of the coded programs addressed all three levels of prevention.

SEF: Half (50%) of the programs coded addressed Individual based behaviors and/or risk factors. One fifth (20%) of programs coded addressed relational based behaviors and or risk factors. Almost a quarter (23%) of programs coded addressed Community based behaviors and/or risk factors. A small percentage (7%) addressed Society level behaviors and/or risk factors.

Frieden's Health Impact: The largest distribution of programs, over half (51%), were coded as Education and Counseling. A minority (6%) of programs were coded as related to Clinical interventions. More than one third (33%) of programs were coded as Long Lasting interventions; these interventions included large scale media campaigns. A minority of programs (9%) was coded as Changing the Context, and none of the programs were coded as Socio-economic Status.

The 3Es of Injury Prevention: The largest distribution of programs, almost two-thirds (59%), were coded as Education only. The second largest distribution of coded programs (19%) identified programs that address all

three of the Three E's of Injury. A minority of programs (9%) addressed engineering only and the least amount of programs (3%) addressed only enforcement.

Table 46. Program descriptors for selected frameworks (n= 243 programs).							
Frameworks N %							
Injury and/or Violence Prevention Intent							
Intentional Only	109	45%					
Unintentional Only	57	23%					
Both Intentional and Unintentional	77	32%					
Prevention Levels							
Primary Prevention	167	69%					
Secondary Prevention	1	0%					
Tertiary Prevention	27	11%					
Combination of any two	36	15%					
All Levels of Prevention	12	5%					
Socio-Ecological Framework							
1-Individual	122	50%					
2-Relationship	49	20%					
3-Community	56	23%					
4-Society	16	7%					
Freidan's Pyramid							
1- Education & Counseling	124	51%					
2- Clinical	15	6%					
3- Long Lasting	81	33%					
4- Change Context	23	9%					
5- SES	0	0%					
The Three Es of Injury							
1- Education ONLY	143	59%					
2- Enforcement ONLY	8	3%					
2- Engineering ONLY	22	9%					
3- Combination of any two	23	9%					
4- ALL	47	19%					

6. Organizational Capacity and Program Descriptors

a. Program Descriptors by Selected Frameworks and Capacity Levels

Organizational capacity scores were divided into High Capacity (greater than or equal to twenty-five), Medium Capacity (less than 25 and greater than or equal to 21) and Low Capacity (less than 21). High Capacity organizations listed more programs than other capacity levels, and provided almost half (47%) of the programs reviewed (Table 47). An in-depth analysis was conducted for program descriptors by capacity (Appendix N).

The majority of programs for all program descriptors were in the lowest levels of impact, Frieden's Education and Counseling (52%), Socio-Ecological Framework (50%), and Education (58%) (Table 47). The general distribution at the aggregate level (All Programs) is closely aligned with the distribution of the organizations by level of capacity. As organizational capacity levels decrease the number of programs decrease as well.

High Capacity organizations were more likely to have programs in higher levels of impact (e.g. community or societal levels of the SEF), than the medium and low organizational capacity. Overall, the approaches used by the reported programs were not in the higher levels of impact (0% Frieden's Socio-Economic Status, and 6% at the Society Level for the Socio-Ecological Framework) (Table 47).

b. Program Distribution

On average, organizations listed approximately two (2.2) programs, with Higher Capacity listing a higher averaged (3.3) of programs and Low Capacity listing the lowest average (1.3) (Table 47). Organizations were asked (question #16) "How many (#) childhood health and safety programs or activities related to the prevention of injury and violence does your organization implement?." Participants provided a numerical response, in which High Capacity organizations reported the highest average (5.1) and the highest median (5).

	All Programs High Capacity ^b I		Med Co N=	Med Capacity ^c N= 75		ıpacity ^d -46		
	N	% ^e	N N	%	N	%	N	%
Prevention Level								
Primary	158	68%	66	28%	60	26%	32	14%
Secondary	1	0%	1	0%	0	0%	0	0%
Tertiary	26	11%	10	4%	8	3%	8	3%
Combination of any two	35	15%	25	11%	6	3%	4	2%
All Levels of Prevention	12	5%	8	3%	1	1%	2	1%
Total	231	100%	110	47%	75	33%	46	20%
Socio-Ecological Framework		1			1			
1- Individual	116	50%	45	19%	48	21%	23	10%
2- Relationships	48	21%	18	8%	16	7%	14	6%
3- Community	52	23%	36	16%	8	3%	8	3%
4- Society	15	6%	11	5%	3	1%	1	0%
Total	231	100%	110	48%	75	32%	46	20%
Frieden's Health Impact Pyramid								
1- Education & Counseling	121	52%	50	22%	45	19%	26	11%
2- Clinical & Legal	15	6%	9	4%	2	1%	4	2%
3- Long Lasting	73	32%	34	15%	25	11%	14	6%
4- Changing the Context	22	10%	17	7%	3	1%	2	1%
5- SES	0	0%	0	0%	0	0%	0	0%
Total	231	100%	110	48%	75	32%	46	20%
The Three E's of Injury								
1-Education	134	58%	55	24%	50	22%	29	13%
2-Enforcement	8	3%	4	2%	0	0%	4	2%
2-Engineering	21	9%	10	4%	7	3%	4	2%
3-Combination of any two	21	9%	15	6%	4	2%	2	1%
4 - All Three Es	47	20%	26	11%	14	6%	7	3%
Total	231	100%	110	48%	75	32%	46	20%
Program Distribution								
Average # Programs Listed (0-5; question 17)	2.2		3.3		2.3		1.3	
Average # Programs at organization (question 16)	3.2		5.1		3.4		1.5	
Range of Programs	0-25 ^e		0-25		0-22		0-5 ^e	
Median for Programs	2		5		2		1	

Table 47. Program descriptors for selected frameworks by organizational capacity level.^a

^aCapacity index was created for organizations who completed the capacity questions on the organization survey, some organizations (N=12) did not complete capacity questions, this table includes programs listed by organizations who completed a capacity score (Total Programs = 231).

^bHigh Capacity Organizations N= 33 with 110 programs

^cMedium Capacity Organizations N= 33 with 76 programs

^dLow Capacity Organizations N= 32 with 46 programs

^eThree outliers greater than 100 were removed from program averages in order to provide a more accurate average.

7. Relationship among Leading Causes of Childhood Injury, Injury Prevention Focus, and Programmatic Approach

a. Organizations by Leading Injury Events and Capacity Levels

The secondary data analysis indentified the leading injury causes for Wake County children; of these, two are intentional and eight are unintentional. More organizations identified working in intentional injuries and/or violence then unintentional injuries. For example, almost half of all organizations identified working in Assault (including Assaults/physical violence (57%), Child Abuse/Maltreatment (66%), Sexual Violence (47%)); or Self-Inflicted/Self-Harm (46%), more than any leading unintentional injury cause. In addition, across the leading injury causes, there are a greater percentage of High Capacity organizations working in intentional areas. As capacity levels decrease, the focus on unintentional injury causes also decreases.

Assault and Self-Inflicted/Self-Harm were identified as priority areas for organizations regardless of capacity levels. MVC Traffic- Occupant was identified as the leading cause for mortality and morbidity in Wake County; however, fewer than half of the organizations identified working in this field (Table 48). Across all eight unintentional leading causes, fewer than half of the organizations reported working within any unintentional injury cause.

Table 48. Organizations by leading injury events and organizational capacity level. ^a									
Leading Injury Types		All Oraanizations		High Capacity ^b		Med Capacity ^c		Low Capacity ^d	
		N=110	%	N=33	%	N=33	%	N=32	%
1.	MVC Traffic-Occupant	38	36%	15	45%	9	27%	9	28%
2.	Assault								
	a. Assault/Physical Violence	62	57%	22	67%	18	55%	17	53%
	 b. Child Abuse/ Maltreatment (physical, sexual, emotional) 	71	66%	26	79%	18	55%	22	69%
	c. Sexual Violence (e.g. assault, rape)	51	47%	18	55%	11	33%	18	56%
3.	MVC Traffic-Pedestrian	30	28%	12	36%	9	27%	6	19%
4.	Self-Inflicted/ Self-Harm	50	46%	20	61%	11	33%	15	47%
5.	Falls	25	23%	9	27%	9	27%	6	19%
6.	Unintentional Suffocation	12	11%	6	18%	3	9%	2	6%
7.	Burns	15	14%	6	18%	6	18%	3	9%
8.	Struck By or Against								
9.	a. Natural/Environmental Factors	24	22%	9	27%	11	33%	4	13%
	b. Animal bites	11	10%	4	12%	4	12%	2	6%
10.	Bicycle Injury/Crashes	25	23%	8	24%	10	30%	4	13%

^aCapacity index was created for organizations who completed the capacity questions on the organization survey, some organizations (N=12) did not complete capacity questions, this table includes programs listed by organizations who completed a capacity score (Total Programs = 231).

^bHigh Capacity Organizations N= 33 with 110 programs

^cMedium Capacity Organizations N= 33 with 76 programs

^{*d}Low Capacity Organizations N= 32 with 46 programs*</sup>

b. Estimated Program Impact Index

A program impact index variable was derived from summing an organizations program's descriptor indicators for the Socio-Ecological Framework, Frieden's Health Impact Pyramid, and the Three E's of injury prevention. This index ranged from a low impact score of three to a high impact score of 13. Estimated program impact scores increased when programs were coded for higher levels on the Socio-Ecologic Framework, Frieden's Health Impact Pyramid, and the Three E's of injury prevention. Estimated program impact index ranged from 3 to 12, with an average of 5.8. For descriptive purposes, the estimated program impact index was divided into four groups, high impact (>7), medium impact (<7,>4); and low impact (<=4) (Table 49). Twenty-four organizations listed no programs.

Table 49. Estimated program impact index distribution.						
Impact Level	N	%				
High Impact (>7)	27	25%				
Med Impact (<7, >4)	29	26%				
Low Impact (<=4)	30	27%				
No Programs Listed	24	22%				

c. Estimated Program Impact Index by Injury Type and Organization Capacity Level

In addition to coding for the various impact frameworks, all programs were assigned an injury category code; intentional only, unintentional only, or both intentional and unintentional. High Capacity organizations had the highest averages for program impact. The highest program impact average is for high capacity unintentional injury programs (8.3) (Table 50).

Table 50. Average program impact index by injury intent and organization capacity level, range low (3) to high (13).									
	All Programs	High Capacity ^a	Med Capacity ^b	Low Capacity ^c					
пјигу туре	N= 243	N=110	N= 75	N=46					
Intentional Only	4.5	4.6	4.3	4.6					
Unintentional Only	6.6	8.3	4.4	5.6					
Both Intentional and Unintentional	6.9	8.1	6.5	5.8					
All programs	5.8	6.3	5.5	5.6					

^aHigh Capacity Organizations N= 33 with 110 programs

^bMedium Capacity Organizations N= 33 with 76 programs

^cLow Capacity Organizations N= 32 with 46 programs

d. Program Descriptors by Intent

Programs addressing intentional injury only (109 programs, 45%) are almost twice as common as programs addressing unintentional injury only (57 programs, 23%). Almost one third of programs address both intentional and unintentional injuries and/or violence issues and events.

The majority of programs for all Program Impact Descriptors were in the lowest levels of impact, Socio-Ecological Framework (50%), Frieden's Education and Counseling (51%), and Education (59%) (Table 51). This trend is consistent for intentional only programs, unintentional only programs and both intentional and unintentional programs.

Table 51. Program descriptors of selected framework	orks by in	tent. ª						
	All Pro	grams	Intent	tional	Unintentional		Both I/U	
	N	%	N	%	Ν	%	Ν	%
Prevention Level								
Primary	167	68%	70	29%	52	21%	45	19%
Secondary	1	0%	0	0%	0	0%	1	0%
Tertiary	27	11%	16	7%	0	0%	11	5%
Combination of any two	36	15%	18	7%	4	2%	14	6%
All Levels of Prevention	12	5%	5	2%	1	0%	6	2%
Socio-ecological Framework								
1- Individual	122	50%	60	25%	33	14%	29	12%
2- Relationships	49	20%	34	14%	1	0%	14	6%
3- Community	56	23%	14	6%	18	7%	24	10%
4- Society	16	7%	1	0%	5	2%	10	4%
Frieden's Health Impact Pyramid								
1- Education & Counseling	124	51%	75	31%	22	9%	27	11%
2- Clinical & Legal	15	6%	11	5%	1	0%	3	1%
3- Long Lasting	81	33%	23	9%	23	9%	35	14%
4- Changing the Context	23	9%	0	0%	11	5%	12	5%
5- SES	0	0%	0	0%	0	0%	0	0%
The Three E's of Injury								
1-Education	143	59%	88	36%	23	9%	32	13%
2-Enforcement	8	3%	2	1%	1	0%	5	2%
2-Engineering	22	9%	5	2%	9	4%	8	3%
3- Combination of any two	23	9%	4	2%	11	5%	8	3%
4 - All Three Es of Injury	47	19%	10	4%	13	5%	24	10%
Total	243	100%	109	45%	57	23%	77	32%

^aSome percents do not add to 100% due to rounding

D. Survey of Wake County Coalitions Addressing Childhood Health and Safety

This section provides highlights of the coalition survey results. Detailed summary tables for all survey questions are included in Appendix O.

A total of 15 coalitions (response rate 83%) completed the John Rex Endowment Childhood Health and Safety Profile (Table O-1). The average size is 57 members per network; 60% are small networks (0-50 members) and 40% are large networks (50+ members).

Most (60%) meet on a monthly (27%) or quarterly (33%) basis. One network (7%) reported only meeting once a year (Table O-2). All coalitions communicate via email and most communicate through in person meetings (80%) (Table O-3). Over half of the coalitions identified North Carolina (60%) and Wake County (53%) as their geographic service area (Table O-4).

At least 60% of all coalitions identified specifically targeting African-American, Caucasian, Hispanic, urban and low income populations. The least targeted populations are LGBT (13%) and homeless (13%) populations (Table O-5)

Coalitions identified working with policy makers (80%) and public safety officials (80%) most often, followed by medical professionals (73%), parents/caregivers (60%), and children (53%). On average, the majority (53%) of coalitions work with 4—6 different groups of people (Tables O-6, O-7).

Coalitions were asked to identify on a seven point scale of not important to very important the degree to which their networks focus on specific activities. Almost all coalitions reported that education (87%) was very important to their work focus, followed by advocacy (67%) and research/data (60%) (Table O-8). Over half of the coalitions (53%) rated counseling as not important.

Almost one third (30%) of coalitions identified advocacy as a type of service provided, followed by direct services (21%), and research evaluation (18%). One (7%) coalition identified funding as a type of service provided (Table O-9).

The majority of coalitions reported that childhood injury and/or violence prevention was very to extremely important, with the average of 5.9, or very important (TableO-10).

Over half of the coalitions identified working in motor vehicle crashes (67%) and poisoning (53%) (Tables O-11, O-13). At least 20% of all coalitions identified working in all of the categories presented for intentional injuries or events. Only one coalition (7%) identified working in the areas of suffocation and injury related to environmental factors.

Coalitions were asked their ability to identify resources (e.g. locate evidence based practices; find childhood injury data; identify funding sources; and identify other local childhood injury and/or violence prevention networks) and integrate resources (e.g. use evidence based practices in injury prevention programs; use childhood injury data; obtain funding; and use existing local childhood injury and/or violence prevention network). Overall, most coalitions reported having medium to high levels of capacity on the indicators. The highest level of capacity was reported for the use of childhood injury data for prioritizing program development and planning (64%), followed by the ability to find relevant childhood injury data for prioritizing program development and planning. The ability to obtain funding is an area where few coalitions reported high capacity (8%) (Table O-13).

All of the coalitions reported using data. Almost all (80%) reported using at least one data source from North Carolina (Table O-14). Two thirds (67%) reported using at least one source of national level data and more than half (53%) reported using at least one form of Wake County data. The most commonly used data source is the NC Division of Public Health (including the State Center for Health Statistics).

Coalitions were each asked an open ended question to describe how their coalition is funded (Question #19, Appendix E); the majority (67%) responded. Funding sources include in-kind funding (2), WakeMed (2), JRE (2), Wake County (1), grants (1), private funders (1), and "voluntary basis" (1).

Coalitions' responses for the value of capacity building activities varied. The capacity building activities reported as 'somewhat valuable' to 'very valuable' were attending trainings on evidence-based injury prevention programs, interventions, and strategies (39%), followed by attending trainings focused on building capacity in resource development (38%) and participating with Wake County stakeholders working in injury prevention to dialogue about childhood injury priorities and networking (37%) (Table O-15).

E. Summary of Evidence Based Practices

A total of 234 programs, interventions, and countermeasures were included in the Evidence-based Compilation developed for this project. Programs were coded for injury causes that address a combination of intentional and unintentional injury (Table 52) using our standardized terminology. The compilation of IP programs includes interventions from 16 registries. These registries provide public health practitioners with a varying degree of readily available information on a wide range of evidence-based programs. Criteria for classifying programs are not standardized across the registries. Several of the registries include the classification of "Unproven", "Recommended Against", or other terminology, suggesting that the reviewed program does not achieve the intended outcome. Currently, six (3 %) of the 234 programs would are not recommended or recommended against.

Programs addressing unintentional injury (Table 52) were the most common (50%) followed by programs that address intentional injuries (31%). The greatest number of programs identified addressed motor vehicle crashes (in general) with 68 programs (29%). Most frequent intentional injury prevention programs addressed Assault, with 52 programs (22%). Programs were not identified for several of the injury causes, including, human trafficking, Motor Vehicle Crashes – pedestrians, Motor Vehicle Crashes–bicycles, and environmental factors.

Table 52.	Evidence-based practices compilation by injury event (n=234 programs). ^a			
Group	Injury Type ^b	N	Group %	Total %
	Child Abuse/ Maltreatment (physical, sexual, emotional)	9	13%	4%
	Assault/Physical Violence	52	72%	22%
ona	Bullying	8	11%	3%
entio	Sexual Violence (e.g. assault, rape)	4	6%	2%
Inte	Self Inflicted/Self Harm	16	22%	7%
	Human trafficking	0	0%	0%
	Total Intentional	72	100%	31%
	Motor Vehicle Crashes (in general)	68	58%	29%
	Cars/trucks/buses	4	3%	2%
	Pedestrians	0	0%	0%
	Bicycles	0	0%	0%
	Motorcycles	1	1%	0%
a	Poisoning/overdose	5	4%	2%
tion	Bicycle injury/crashes (NOT involving a motor vehicle)	3	3%	1%
ent	Falls	3	3%	1%
nint	Environmental Factors (e.g. weather related)	0	0%	0%
	Firearm	11	9%	5%
	Drowning/submersion	19	16%	8%
	Burns, including fire and scalds	17	14%	7%
	Suffocation	3	3%	1%
	Animal bites	1	1%	0%
	Total Unintentional	118	100%	50%

^aCategories are not mutually exclusive

^bBold type indicates a leading cause of injury for Wake County

Several of the programs included in NREPP addressed risk factors that relate to intentional and sometimes unintentional injuries (Table 53). These risk factors were included in the compilation to provide additional information on the prevention of injury and violence. The most common risk factor was alcohol (48%), followed by social functioning (31%) and drugs (27%).

Table 53.	Evidence-based practices compilation by risk factor (n=234 programs). ^a			
Group	Risk Factor	N	Group %	Total %
	Alcohol	65	48%	28%
	Crime/Delinquency	35	26%	15%
	Drugs	37	27%	16%
ors	Mental Health	32	24%	14%
acto	Family Relationships	28	21%	12%
Ц Ц Ц	Social Functioning	42	31%	18%
Ris	Substance Abuse	13	10%	6%
	School Readiness/Academic Achievement	29	21%	12%
	Risky Sexual Behavior	11	8%	5%
	Risk Factor Totals	136	100%	58%

^aCategories are not mutually exclusive

Targeted age groups were identified for the programs based on categories from NREPP (Table 54). Age groups were considered 'targeted' when the program directly addressed a specific age group (e.g. age group is early childhood for Early Head Start programs) or if they were targeted for behavior change by an intervention (e.g. age groups are adolescent, young adulthood, and adult for Blood Alcohol Content Laws). The greatest number of programs targeted the adolescent age group (55%), followed by young adulthood (43%) and adults (41%). Adult programs were included in the Evidence-based Practices Compilation when the program had an impact on children/childhood safety by targeting adult behaviors (e.g. parenting classes). Universal settings are intended to reach all populations (i.e., they are not targeted to reach any particular environment, setting, or in some cases, age group).

Table 54. Targeted age groups for evidence-based compilation (n=234 programs). ^a						
Age Range	N	%				
Early Childhood (0-5)	40	16%				
Childhood (6-12)	92	38%				
Adolescent (13-17)	133	55%				
Young Adulthood (18-25)	105	43%				
Adult (26-55)	100	41%				
Universal (e.g. laws, mass media)	20	8%				

^aCategories are not mutually exclusive

Table 55 provides injury intent and injury causes by age. The highest number of programs reviewed for intentional injuries were for Adolescents (43 programs), followed by Childhood (41 programs) and Adult (24 programs). The greatest number of programs address Assault/Physical Violence for the age groups of Childhood (35 programs) and Adolescents (34 programs). The highest number of programs reviewed for unintentional injuries were for Young Adulthood (80 programs) and Adult (77 programs). The highest number of programs were identified for Motor Vehicle Crashes (in general) for Young Adulthood (50 programs), Adult (46 programs) and Adolescent (42 programs). These programs target adult populations to prevent childhood injuries (e.g. education of proper use of child seats). Young Adulthood and Adult had several programs that address Burns (11 programs) and Drowning (11 programs), however, few of the programs reviewed addressed any of the other types of unintentional injuries. For example, no programs addressed Environmental Factors.

Table 55. Evidence-based programs addressin	g injury cause	es by age rang	ge (n=190). ^a			
			Age R	lange		
Injury Type	Early Childhood (0-5)	Childhood (6-12)	Adolescent (13-17)	Young Adulthood (18-25)	Adult (26-55)	Universal ^b
Intentional						
Child Abuse/ Maltreatment (physical, sexual, emotional)	8	4	5	6	8	0
Assault/Physical Violence	12	35	34	14	14	1
Bullying	0	6	5	0	0	0
Sexual Violence (e.g. assault, rape)	1	0	3	1	1	0
Self Inflicted/Self Harm	0	1	6	10	7	2
Human trafficking	0	0	0	0	0	0
Total Intentional Counts (Programs N=72)	17	41	43	23	24	3
Unintentional						
Motor Vehicle Crashes (in general)	2	4	42	50	46	6
Cars/trucks/buses	0	0	0	4	4	0
Pedestrians	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0
Motorcycles	0	0	0	1	1	0
Poisoning/overdose	0	0	0	4	5	0
Bicycle injury/crashes (NOT involving a motor vehicle)	2	3	3	2	2	0
Falls	0	0	0	3	3	0
Environmental Factors (e.g. weather related)	0	0	0	0	0	0
Firearm	1	1	0	8	8	2
Drowning/submersion	4	2	3	11	11	6
Burns, including fire and scalds	4	4	4	11	11	5
Suffocation	1	0	0	3	3	0
Animal bites	1	1	0	0	0	0
Total Unintentional Counts (Programs N=118)	15	14	51	80	77	19

^aCategories are not mutually exclusive

^bE.g. laws and mass media campaigns

Table 56 provides risk factors by age. The highest number of programs reviewed for Risk Factors addressed Adolescents (100 programs), followed by Childhood (75 programs). The greatest number addressed Alcohol for Adolescents (56 programs) followed by Adolescence programs addressing Drug Use (31 programs). Crime/Delinquency programs addressed each age range.

Table 56. Evidence-based programs addressing risk factors by age range (programs n=136). ^a										
	Age Range									
Risk Factor	Early Childhood (0-5)	Childhood (6-12)	Adolescent (13-17)	Young Adulthood (18-25)	Adult (26- 55)	Universal ^b				
Alcohol	0	26	56	29	26	0				
Crime/Delinquency	6	17	27	11	9	1				
Drugs	0	25	31	7	7	0				
Mental Health	12	22	22	5	9	0				
Family Relationships	10	20	19	9	14	0				
Social Functioning	14	37	22	11	12	0				
Substance Abuse	1	12	9	1	1	0				
Academic Achievement	7	21	17	6	6	0				
Risky Sexual Behavior	0	7	10	5	3	0				
Total Risk Factor Counts	23	75	100	46	41	1				

^aCategories are not mutually exclusive

^bE.g. laws and mass media campaigns

Setting locations were identified for the programs based on categories from NREPP (Table 57). The greatest number of programs was identified for the school setting (92 programs), followed by other or unspecified (84 programs), universal (52 programs), and home settings (39 programs).

Table 57. Evidence-based compilation settings (not mutually exclusive, n=234 programs).					
Setting	N	%			
School	92	38%			
Home	39	16%			
Workplace	3	1%			
Residential	7	3%			
Outpatient	16	7%			
Correctional	8	3%			
Primary Care	14	6%			
Other or Unspecified	84	35%			
Universal (e.g. laws, mass media)	52	21%			

Table 58 provides injury intent and injury causes by setting. The highest number of programs reviewed for intentional injury was in the school setting (41 programs) followed by Other or Unspecified (25 programs) and Home (19 programs). The most programs addressed Assault/Physical Violence in the School setting (35 programs). The highest number of programs reviewed for unintentional areas were Universal programs (52 programs), followed by Other or Unspecified (41 programs) and Primary Care (14 programs). The most programs addressed Motor Vehicle Crashes (in general) at the Universal level (36 programs).

Table 58. Evidence-based programs addressing injury causes by setting (n=190). ^a									
	Settings								
Injury Type	School	Home	Workplace	Residential	Outpatient	Correctional	Primary Care	Other or Unspecified	Universal ^b
Intentional									
Child Abuse/ Maltreatment (physical, sexual, emotional)	2	7	0	1	4	1	0	5	0
Assault/Physical Violence	35	12	0	3	7	5	0	20	1
Bullying	8	0	0	0	0	0	0	0	0
Sexual Violence (e.g. assault, rape)	3	2	0	0	0	0	0	2	0
Self Inflicted/Self Harm	5	3	0	0	1	0	1	5	5
Human trafficking	0	0	0	0	0	0	0	0	0
Total Intentional Counts (Programs N=72)	41	19	0	3	9	5	1	25	5
Unintentional									
	-	-	1	0	0	4	-	10	26
Motor Vehicle Crashes (in general):	6	2	T	U	0	1	5	18	50
Motor Vehicle Crashes (in general): Cars/trucks/buses	6 0	2	0	0	0	1	5 0	18 2	2
Motor Vehicle Crashes (in general): Cars/trucks/buses Pedestrians	6 0 0	2 0 0	1 0 0	0 0 0	0 0 0	1 0 0	5 0 0	18 2 0	2 0
Motor Vehicle Crashes (in general): Cars/trucks/buses Pedestrians Bicycles	6 0 0 0	2 0 0 0	0 0 0	0 0 0	0 0 0	1 0 0 0	5 0 0 0	18 2 0 0	2 0 0
Motor Vehicle Crashes (in general): Cars/trucks/buses Pedestrians Bicycles Motorcycles	6 0 0 0	2 0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	1 0 0 0	5 0 0 0	18 2 0 0 0	2 0 0 1
Motor Vehicle Crashes (in general): Cars/trucks/buses Pedestrians Bicycles Motorcycles Poisoning/overdose	6 0 0 0 0 0	2 0 0 0 0 4	1 0 0 0 0	0 0 0 0 0	0 0 0 0 0	1 0 0 0 0	5 0 0 0 0 3	18 2 0 0 0 1	2 0 0 1 0
Motor Vehicle Crashes (in general): Cars/trucks/buses Pedestrians Bicycles Motorcycles Poisoning/overdose Bicycle injury/crashes (NOT involving a motor vehicle)	6 0 0 0 0 0 1	2 0 0 0 4 0	1 0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	1 0 0 0 0 0 0	5 0 0 0 3 0	18 2 0 0 1 1	2 0 0 1 0 2
Motor Vehicle Crashes (in general): Cars/trucks/buses Pedestrians Bicycles Motorcycles Poisoning/overdose Bicycle injury/crashes (NOT involving a motor vehicle) Falls	6 0 0 0 0 1 0	2 0 0 0 4 0 3	1 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	1 0 0 0 0 0 0 0	5 0 0 0 3 0 3	18 2 0 0 1 1 0	2 0 0 1 0 2 0 2
Motor Vehicle Crashes (in general): Cars/trucks/buses Pedestrians Bicycles Motorcycles Poisoning/overdose Bicycle injury/crashes (NOT involving a motor vehicle) Falls Environmental Factors (e.g. weather related)	6 0 0 0 0 0 1 0 0	2 0 0 0 4 0 3 0	1 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	1 0 0 0 0 0 0 0 0 0	5 0 0 0 3 0 3 0 3 0	18 2 0 0 1 0 0 0	30 2 0 1 0 2 0 0 0 0 0 0 0 0 0
Motor Vehicle Crashes (in general): Cars/trucks/buses Pedestrians Bicycles Motorcycles Poisoning/overdose Bicycle injury/crashes (NOT involving a motor vehicle) Falls Environmental Factors (e.g. weather related) Firearm	6 0 0 0 1 0 0 0 0 0	2 0 0 4 0 3 0 1	1 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0	1 0 0 0 0 0 0 0 0 0 0 0	5 0 0 0 3 0 3 0 1	18 2 0 0 1 0 0 3	2 0 0 1 0 2 0 0 0 6
Motor Vehicle Crashes (in general): Cars/trucks/buses Pedestrians Bicycles Motorcycles Poisoning/overdose Bicycle injury/crashes (NOT involving a motor vehicle) Falls Environmental Factors (e.g. weather related) Firearm Drowning/submersion	6 0 0 0 1 0 0 0 0 0 1	2 0 0 4 0 3 0 1 5	1 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0	1 0 0 0 0 0 0 0 0 0 0 0 0	5 0 0 0 3 0 3 0 1 3	18 2 0 1 1 0 3 15	2 0 0 1 0 2 0 0 0 6 0
Motor Vehicle Crashes (in general): Cars/trucks/buses Pedestrians Bicycles Motorcycles Poisoning/overdose Bicycle injury/crashes (NOT involving a motor vehicle) Falls Environmental Factors (e.g. weather related) Firearm Drowning/submersion Burns, including fire and scalds	6 0 0 1 0 0 0 0 0 1 1 1	2 0 0 4 0 3 0 1 5 5	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 0 0 3 0 3 0 1 3 6	18 2 0 0 1 1 0 3	2 0 0 1 0 2 0 0 0 6 0 9
Motor Vehicle Crashes (in general): Cars/trucks/buses Pedestrians Bicycles Motorcycles Poisoning/overdose Bicycle injury/crashes (NOT involving a motor vehicle) Falls Environmental Factors (e.g. weather related) Firearm Drowning/submersion Burns, including fire and scalds Suffocation	6 0 0 0 1 0 0 0 0 1 1 1 0	2 0 0 4 0 3 0 1 5 5 5 2	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 0 0 3 0 3 0 1 3 6 3	18 2 0 0 1 0 3 0	2 0 1 0 2 0 0 0 6 0 9 9
Motor Vehicle Crashes (in general): Cars/trucks/buses Pedestrians Bicycles Motorcycles Poisoning/overdose Bicycle injury/crashes (NOT involving a motor vehicle) Falls Environmental Factors (e.g. weather related) Firearm Drowning/submersion Burns, including fire and scalds Suffocation Animal bites	6 0 0 1 0 0 0 0 0 1 1 1 0 1	2 0 0 4 0 3 0 1 5 5 5 2 0	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5 0 0 3 0 3 0 1 3 6 3 0	18 2 0 1 1 0 3 15 3 0 0 0	2 0 1 0 2 0 0 0 6 0 9 0 0 0
Motor Vehicle Crashes (in general): Cars/trucks/buses Pedestrians Bicycles Motorcycles Poisoning/overdose Bicycle injury/crashes (NOT involving a motor vehicle) Falls Environmental Factors (e.g. weather related) Firearm Drowning/submersion Burns, including fire and scalds Suffocation Animal bites Total Unintentional Counts (Programs N=118)	6 0 0 1 0 0 0 0 1 1 0 1 1 0 1 1	2 0 0 4 0 3 0 1 5 5 2 0 1 1	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1	5 0 0 3 0 3 0 1 3 6 3 0 1 4	18 2 0 0 1 1 0 3 15 3 0 0 14 0 0 15 3 0 0 15 3 0 0 15	2 0 1 0 2 0 0 0 6 0 9 9 0 0 0 52

^bE.g. laws and mass media campaigns

Table 59 provides injury risk factors by setting. The highest number of programs reviewed for Risk Factors were for School settings (81 programs), followed by Other Unspecified (50 programs) and Home (28 programs). The School setting was the most common setting for Alcohol (38 programs), followed by Drugs (30 programs) and Social Functioning (30 programs). School and the Home setting had programs for each Risk Factor.

Table 59. Evidence-based programs addressing risk factors by setting (programs n=136). ^a									
	Setting								
Risk Factors	School	Home	Workplace	Residential	Outpatient	Correctional	Primary Care	Other or Unspecified	Universal ^b
Alcohol	38	10	2	2	5	4	0	19	13
Crime/Delinquency	21	10	1	6	5	6	0	16	0
Drugs	30	9	1	1	5	3	0	13	0
Mental Health	22	9	0	2	10	1	0	13	0
Family Relationships	22	13	0	0	6	0	0	16	0
Social Functioning	30	10	1	0	7	1	0	18	0
Substance Abuse	9	2	0	0	1	1	0	6	0
Academic Achievement	23	10	1	2	3	2	0	12	0
Risky Sexual Behavior	7	3	1	0	0	0	0	7	0
Total Risk Factor Counts (Programs N=136)	81	28	3	7	16	8	0	50	13

^aCategories are not mutually exclusive ^bE.g. laws and mass media campaigns