

Weapon Injury Data

Notes from the Weapon-Related Injury Surveillance System (WRISS)

April 2001

1994 - 1999 Weapon-Related Injuries

This bulletin provides a brief overview of gunshot wound (GSW) and sharp instrument wound (SIW) data collected by the Massachusetts Department of Public Health's Weapon-Related Injury Surveillance System (WRISS) on injuries treated by all hospital emergency depart-

ments during 1999.

Table 1 summarizes injuries reported to WRISS over a six-year period by injury intent (e.g., violence, accidental) and the type of weapon involved.

The overall number of GSWs and SIWs reported to WRISS, among Massachusetts residents, increased 3% statewide from 1,773 in 1998 to 1,820 in 1999. The overall injury rate remained about the same; 28.5/100,000 in 1998 and 28.9/100,000 in 1999.

Violence-related sharp instrument

wounds declined 34% from 1994 in which 1,885 cases were reported, to 1998 in which 1,253 cases were reported. A slight increase was noted in 1999 (n=1,287).

1999 also marked an increase in violence-related firearm injuries. Cases increased statewide by 16.5% from 1998 to 1999 (291 and 339 respectively). The injury rate increased from 4.7/100,000 in 1998 to 5.4/100,000 in 1999.

However, accidental gunshot wounds, which remained relatively stable from 1994 through 1997, dropped by 41% from 1997 to 1999 (158 and 94 respectively). The accidental gun-related injury rate decreased during this time from 2.6/100,000 to 1.5/100,000.

Table 2 provides the number of violence-related GSWs and SIWs to Massachusetts residents reported in 1999 among cities, towns, and specific population groupings.

Notes

Based on record reviews conducted from 1994-96, hospitals report approximately 70-80% of reportable cases; all gun-related injuries regardless of intent, and sharp instrument injuries violently inflicted by another person. Preliminary hospital audits conducted in 2000 indicate reporting levels to be similar.

All reportable injuries treated in the emergency department are included in the system. Pre-hospital deaths are not captured, but are included in annual vital statistics.

Numbers and rates provided here are not adjusted for hospital under-reporting. Rates are based on 1998 population data estimates developed by the Massachusetts Institute for Social and Economic Research.

Table 1. Number of Injuries Treated by Massachusetts Emergency Departments for Gunshot and Sharp Instrument Wounds, 1994-1999

	Number of Cases Reported by Year						Rates* 1999
	1994	1995	1996	1997	1998	1999	
Massachusetts Residents:							
Violent Sharp-Related Injuries	1885	1684	1553	1353	1253	1287	20.5
Violent Gun-Related Injuries:	662	526	393	312	318	375	6.0
<i>Firearms</i>	625	503	337	270	291	339	5.4
<i>Nonpowder guns</i>	37	20	43	25	20	30	0.5
<i>Unknown gun type</i>	0	3	13	17	7	6	--
Total Violent-Related Cases:	2547	2210	1946	1665	1571	1662	26.4
Accidental Gun-Related Injuries:	163	155	166	158	117	94	1.5
<i>Firearms</i>	69	65	55	56	44	25	0.4
<i>Nonpowder guns</i>	92	86	108	96	71	64	1.0
<i>Unknown gun type</i>	2	4	3	6	2	5	--
Self-Inflicted Gun-Related Injuries:	47	47	35	26	31	26	0.4
<i>Firearms</i>	44	43	32	22	30	24	0.4
<i>Nonpowder guns</i>	3	3	3	3	1	1	--
<i>Unknown gun type</i>	0	1	0	1	0	1	--
Unspecified Gun-Related Injuries:	108	100	72	48	54	38	0.6
<i>Firearms</i>	82	68	53	30	42	25	0.4
<i>Nonpowder guns</i>	26	32	17	16	11	13	--
<i>Unknown gun type</i>	0	0	2	2	1	0	--
Total Other Cases:	318	302	273	232	202	158	2.5
Total Massachusetts Residents	2865	2512	2219	1897	1773	1820	28.9
Total Out-of-State Residents	63	53	53	50	43	37	
Total Cases	2928	2565	2272	1947	1816	1857	

*Rate=number of cases per 100,000 residents.

Correction: Please note that these data differ from those reported in our previous publication (*Weapon Injury Data*, March 2000) as follows: **Total Cases** for 1998 should read 1816 (not 1861 as previously reported). Among violent gun-related injuries, 'firearm' and 'unknown gun type' injuries will differ by 1 to 2 cases per year due to coding changes. The overall total of violent-related gunshot wounds is unchanged.

Table 2. Violence-Related Gunshot and Sharp Instrument Wounds
1999 Cases Reported by Massachusetts Hospital Emergency Departments to the Mass. Dept. of Public Health

Patient's City	'98 Population	1999 Cases	'99 Rate/100,000	Patient's City	'98 Population	1999 Cases	'99 Rate/100,000	Patient's City	'98 Population	1999 Cases	'99 Rate/100,000
Group 1: Towns over 175,000 population:				Group 4: Towns 25,000-50,000 population:				<i>continued (Group 4):</i>			
Boston	563,876	482	85.5	Agawam	29,457	2	6.8	N. Attleboro	26,491	2	7.5
<i>Group 1 Total:</i>				Amherst	40,827	1	2.4	Northampton	29,816	0	--
	563,876	482	85.5	Andover	31,857	2	6.3	Norwood	28,878	1	3.5
Group 2: Towns 75,000-175,000 population:				Arlington	43,066	4	9.3	Pittsfield	46,691	11	23.6
Brockton	91,008	84	92.3	Attleboro	40,412	7	17.3	Randolph	32,212	5	15.5
Cambridge	96,292	13	13.5	Barnstable	46,461	2	4.3	Revere	39,987	19	47.5
Fall River	89,276	55	61.6	Belmont	25,787	1	3.9	Salem	40,210	9	22.4
Lowell	106,449	26	24.4	Beverly	40,476	5	12.4	Saugus	25,644	2	7.8
Lynn	83,464	38	45.5	Billerica	38,304	1	2.6	Shrewsbury	29,053	2	6.9
New Bedford	94,835	58	61.2	Braintree	34,278	4	11.7	Stoughton	29,034	2	6.9
Newton	90,506	1	1.1	Bridgewater	25,680	5	19.5	Tewksbury	30,268	1	3.3
Quincy	87,018	14	16.1	Burlington	25,208	1	4.0	Watertown	31,731	4	12.6
Somerville	78,112	22	28.2	Chelmsford	35,093	0	--	Wellesley	28,734	1	3.5
Springfield	150,414	90	59.8	Chelsea	28,747	46	160.0	W. Springfield	28,854	5	17.3
Worcester	169,091	79	46.7	Danvers	25,758	2	7.8	Westfield	40,868	3	7.3
<i>Group 2 Total:</i>				Dartmouth	31,278	1	3.2	Woburn	36,965	1	2.7
	1,136,465	480	42.2	Dracut	28,527	0	--	<i>Group 4 Total:</i>			
Group 3: Towns 50,000-75,000 population:				Everett	36,866	21	57.0		1,617,015	264	16.3
Brookline	60,639	3	4.9	Falmouth	29,186	7	24.0	Group 5: Towns under 25,000 population:*			
Chicopee	53,003	10	18.9	Fitchburg	40,032	14	35.0	<i>Group 5 Total:</i>			
Framingham	66,544	4	6.0	Franklin	28,892	0	--		2,285,300	159	7.0
Haverhill	57,186	15	26.2	Gloucester	29,456	5	17.0	Massachusetts:			
Lawrence	70,325	93	132.2	Holyoke	41,081	41	99.8	<i>Statewide Total:</i>			
Malden	53,703	7	13.0	Leominster	41,875	3	7.2		6,291,263	1662	26.4
Medford	57,983	14	24.1	Lexington	31,751	0	--	<hr/>			
Peabody	50,979	3	5.9	Marlborough	33,980	5	14.7	*Towns under 25,000 population are not			
Plymouth	51,103	6	11.7	Melrose	26,598	3	11.3	separately listed because low case			
Taunton	54,297	15	27.6	Methuen	42,050	10	23.8	incidence and small population result in			
Waltham	59,165	9	15.2	Milton	27,309	0	--	unstable rates. The Massachusetts total			
Weymouth	53,670	9	16.8	Natick	31,940	1	3.1	includes cases with unknown city (n=89).			
<i>Group 3 Total:</i>				Needham	27,851	0	--				
	688,607	188	27.3	N. Andover	26,295	1	3.8				

Weapon-Related Injury Surveillance System

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