

Alcohol Related Injury and Death in La Crosse County – A Report on the Burden of At Risk Alcohol Use and Abuse

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A partnership of:

Injury Research Center at the Medical College of Wisconsin

La Crosse Medical Health Science Consortium

La Crosse County Health Department

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The partners would like to acknowledge the special efforts of the following individuals in contributing to the development of this report:

- Al Bliss, Health Educator, La Crosse County Health Department
- Mary Czinner, Program Coordinator, Injury Research Center at the Medical College of Wisconsin
- Keri Briel Frisch, MS, Program Manager, Injury Research Center at the Medical College of Wisconsin
- Clare E. Guse, MS, Senior Biostatistician, Injury Research Center at the Medical College of Wisconsin
- Robert Hanrahan, Medical Student, Medical College of Wisconsin
- Stephen Hargarten, MD, MPH, Director, Injury Research Center at the Medical College of Wisconsin
- Michelle Hirsch, Programmer, Gundersen Lutheran
- Brianna Kopp, MPH, Injury Prevention and Surveillance Coordinator, Wisconsin Injury Prevention Program
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Burden of alcohol-related injury in La Crosse County data sources:

- WISH (Wisconsin Interactive Health Statistics)
- Medical Examiner, Emergency Department and Inpatient Data
- Wisconsin CODES (Crash Outcome and Evaluation System)
- Police Departments
- Universities

Introduction

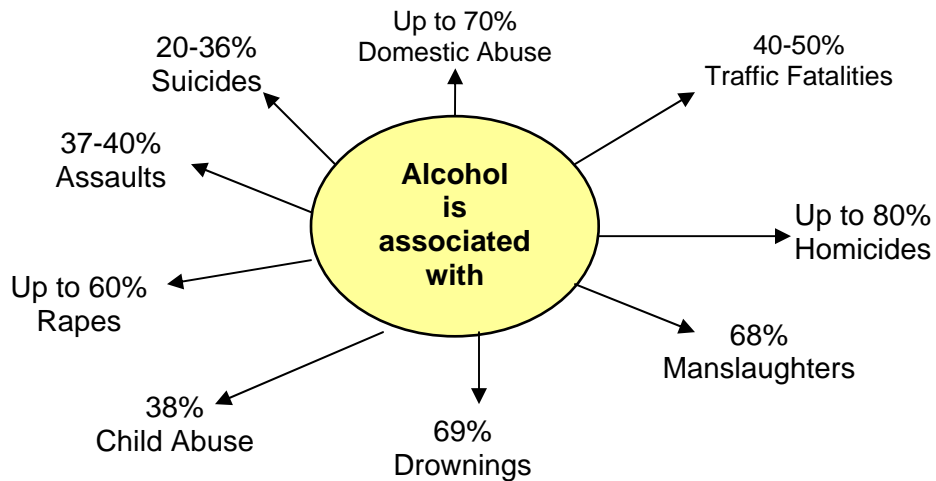
Injury is the leading cause of death for Wisconsin residents age 1-44 years, and alcohol use is often related to those injuries. Young people aged 12-24 are at particular risk for the adverse effects of alcohol use, at risk alcohol use and abuse. According to the 2007 Youth Risk Behavior Surveillance System (YRBSS), nearly half of Wisconsin high school students reported having at least one drink of alcohol in the past month and nearly one third of students reported binge drinking in the past month. Coupled with this drinking are behaviors that put youth at risk for serious injury and premature death due to falls, drowning, motor vehicle crashes, assaults and suicides.

In an effort to further examine the contribution alcohol plays in injury incidence and severity in La Crosse County, this report includes both a description of the burden of alcohol-related injury detailed through hospital discharge data and crash data as well as the burden alcohol places on both law enforcement and college campuses in the community.

The toll of alcohol related injury for both La Crosse residents and non-residents treated in La Crosse hospitals is high:

- There were 14 alcohol-related injury deaths for 15-24 year olds in La Crosse County for the five year period 2003-2007.
- For 12-24 year old La Crosse residents, 10% of all emergency department visits for intentional injury and 3% of all emergency department visits for unintentional injury were alcohol-related.
- For 12-24 year old La Crosse residents, 34% of all inpatient hospital stays for intentional injury and 21% of all inpatient hospital stays for unintentional injury were alcohol-related.
- 4,517 police calls in La Crosse County were alcohol-related for 2006-2007.

Because of voluntary reporting by hospitals, alcohol's true involvement in injury is likely underreported in these data. National studies have indicated that alcohol is associated with a high percentage of a variety of injuries:¹



¹ Public Health Strategies to Reduce Alcohol-Related Illness, Injury and Death in Milwaukee County, Milwaukee Academy of Medicine, 1998

Part One: Burden of Injury

Deaths due to injury 2002-2006

La Crosse County resident deaths age 15-24, Years 2002-2006

Cause of death	Number of deaths	Rate (per 100,000) (N=110,693)	YPLL (total Years Of Potential Life Lost to age 75)
Accidents (unintentional injuries)	11	9.94	601
Intentional self-harm (suicide)	10	9.03	554
Assault (homicide)	4	3.61	219
Other injury (intent unknown)	1	0.90	53
Total injury deaths	26	23.49	1427
All cancers	4	3.61	228
Diabetes mellitus	2	1.81	110
Congenital malformations, deformations, and chromosomal abnormalities	3	2.71	174
Other Causes (no further information on what)	3	2.71	163
ALL CAUSES	38	34.33	2102

* Population size was the sum of the population of 15-24 year olds in 2002 through 2006.

** Rate was calculated by (# deaths/population size) x 100,000.

Source: WISH

Alcohol-related injury deaths 2003-2007

Deaths in La Crosse County aged 15-24

	Number of deaths	Sex	Cause of death	Manner of death	Blood alcohol range
2003-2007	14	13 Male 1 Female	6 motor vehicle crash 4 drowning 1 fall 1 pedestrian struck 2 suicide	9 Unintentional 2 Intentional 3 Undetermined	.15-.32

Source: Office of the Medical Examiner La Crosse County

Hospital Data (Inpatient and Emergency Department) 2004-2006

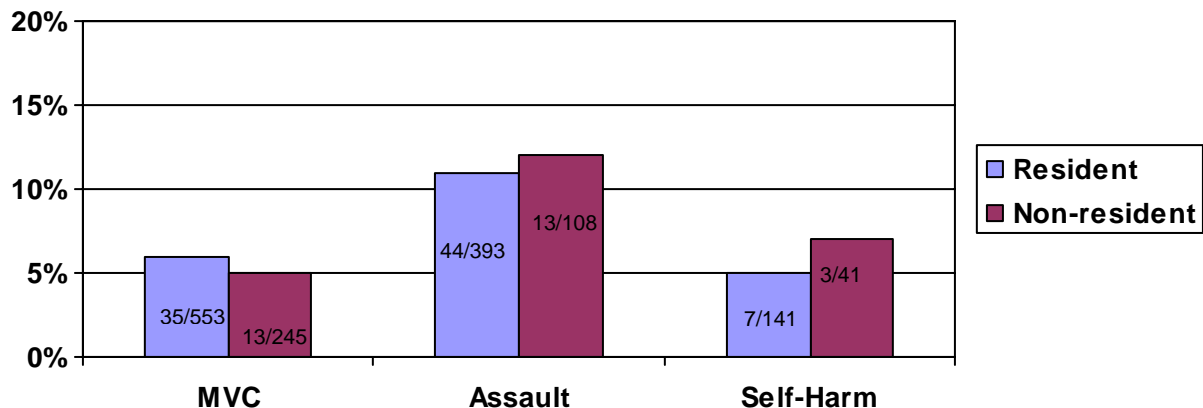
La Crosse resident versus non-resident

Data reported in this section come from both Gundersen Lutheran and Franciscan Skemp for the years 2004-2006 combined. Data were obtained from E (external cause) Codes for both emergency department (ED) visits and inpatient stays. La Crosse residents are compared to non-residents of La Crosse treated in those facilities. The addition of non-residents is important in capturing the large student population living in La Crosse for a limited number of months each year. Determining the scope and nature of alcohol-related injury visits to the emergency department and stays as inpatients is challenging. The scope of the problem is underreported because the system relies upon hospital personnel voluntarily ascertaining whether alcohol was involved in the injury. The definition of an alcohol-related injury in this report was any injury case (as determined by E Codes) which also had a code for alcohol abuse or dependence.

Emergency department visits for alcohol-related injury 2004-2006

	La Crosse Residents		Non-Residents	
	12 to 24	25+	12 to 24	25+
Total Intentional	10%	19%	11%	17%
Homicide-Assault	11%	19%	12%	19%
Suicide-Self Harm	5%	18%	7%	0%
Total Unintentional	3%	3%	4%	2%
Fall	5%	5%	7%	4%
Motor Vehicle Crash (MVC)	6%	4%	5%	4%
Other	2%	2%	2%	1%

Alcohol-related Injury Emergency Department Visits for 12 to 24 year olds 2004-2006

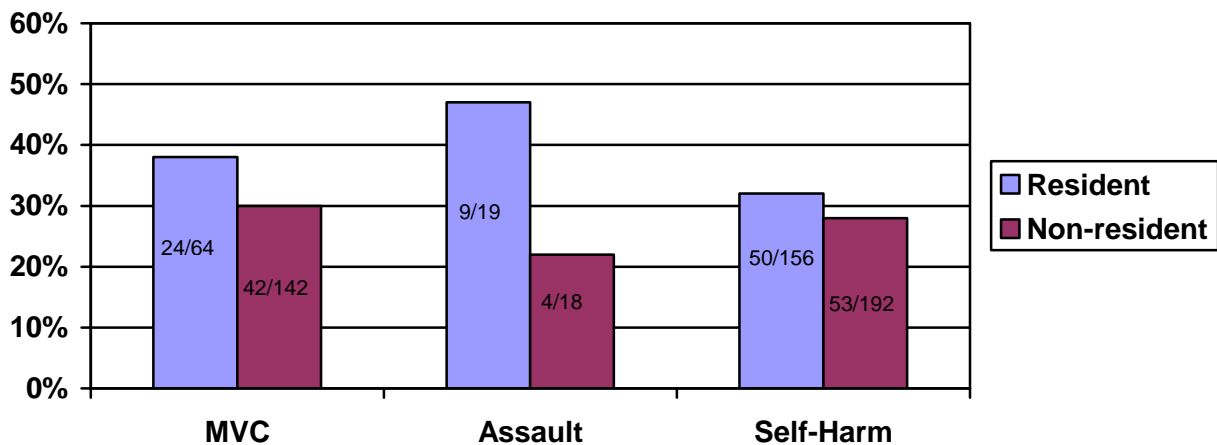


- Of the 553 motor vehicle crashes (MVC) requiring ED visits for 12-24 year old La Crosse residents for 2004-2006, 35 were alcohol-related equaling 6 percent.
- Of the 393 assault injuries requiring emergency department visits for 12-24 year old La Crosse residents for 2004-2006, 44 were alcohol-related equaling 11 percent.
- Of the 141 self harm injuries requiring emergency department visits for 12-24 year old La Crosse residents for 2004-2006, 7 were alcohol-related equaling 5 percent.

Inpatient stays for alcohol-related injury 2004-2006

	La Crosse Residents		Non-Residents	
	12 to 24	25+	12 to 24	25+
Total Intentional	34%	39%	27%	42%
Homicide-Assault	47%	50%	22%	48%
Suicide-Self Harm	32%	38%	28%	41%
Total Unintentional	21%	12%	16%	10%
Fall	19%	10%	10%	7%
Motor Vehicle Crash	38%	23%	30%	22%
Other	13%	12%	9%	10%

Alcohol-related Injury Inpatient Stays for 12 to 24 year olds 2004-2006



- Of the 64 motor vehicle crashes requiring inpatient hospital stays for 12-24 year old La Crosse residents for 2004-2006, 24 were alcohol-related equaling 38 percent.
- Of the 19 assault injuries requiring inpatient hospital stays for 12-24 year old La Crosse residents for 2004-2006, 9 were alcohol-related equaling 47 percent.
- Of the 156 self harm injuries requiring inpatient hospital stays for 12-24 year old La Crosse residents for 2004-2006, 50 were alcohol-related equaling 32 percent.

La Crosse residents aged 12-24 compared to other counties and state

In this section, La Crosse County is compared to similar counties with college campuses and the state as a whole for the years 2004-2006 combined. Data for comparison purposes came from the Wisconsin Inpatient and Emergency Department Hospital Discharge Data.

Emergency department visits for alcohol-related injury in 12-24 year olds, 2004-2006

	% (Number of alcohol-related injuries)				
	La Crosse County	Eau Claire County	Dane County	Portage County	Wisconsin
Total Intentional	11% (551)	7% (423)	11% (1,980)	12% (250)	6% (31,544)
Homicides- Assault	11% (396)	7% (321)	10% (1,291)	11% (189)	5% (23,266)
Suicides- Self harm	6% (139)	7% (98)	12% (634)	15% (60)	7% (7,594)
Total Unintentional	3% (4,646)	1% (5,920)	2% (16,857)	2% (3,044)	1% (347,407)
Falls	5% (963)	2% (1,121)	4% (3,342)	3% (600)	2% (63,641)
Motor vehicle crashes	5% (645)	3% (684)	5% (2,501)	5% (394)	3% (53,224)

Source: Wisconsin Emergency Department Discharge Data (Wisconsin Hospital Association)

Inpatient stays for alcohol-related injury in 12-24 year olds, 2004-2006

	% (Number of alcohol-related injuries)				
	La Crosse County	Eau Claire County	Dane County	Portage County	Wisconsin
Total Intentional	30% (181)	23% (203)	23% (538)	25% (123)	20% (7,111)
Homicide-Assault	47% (17)	33% (12)	36% (76)	20% (5)	17% (1,310)
Suicide-Self harm	28% (160)	22% (190)	21% (460)	26% (117)	20% (5,772)
Total Unintentional	23% (310)	14% (203)	12% (1,038)	20% (150)	11% (12,878)
Falls	19% (42)	11% (44)	9% (245)	18% (22)	9% (2,221)
Motor vehicle crashes	29% (76)	21% (62)	18% (309)	30% (56)	16% (4,653)

Source: Wisconsin Inpatient Hospital Discharge Data (Wisconsin Hospital Association)

Motor Vehicle Crashes 2002-2004

Alcohol related motor vehicle crashes (MVC) can be detailed further through the Wisconsin Crash Outcome Data Evaluation System (CODES). CODES data are a probabilistic linkage between crash data and hospital inpatient and emergency department data. Data included in this section represent alcohol use among drivers of cars and trucks only for the combined years of 2002-2004, for which both hospital and emergency department linked data are available. There are some limitations to a linked data set. Approximately 20% of all crash-related hospitalizations are missing. These unlinked cases result in an underestimate of the total crash injury burden.

Number and percent of drivers using alcohol involved in a MVC 2002-2004

Age (years)	La Crosse County n (%)	All other WI counties n (%)
16-24	206 (5%)	9753 (5%)
25-44	250 (6%)	12376 (6%)
45-64	83 (3%)	4263 (3%)
65-74	9 (15%)	425 (25%)
75+	2 (<1%)	145 (1%)

- 3.8% of La Crosse County crashes involved alcohol use by the driver as compared to 4% of crashes in all other Wisconsin counties.

Roadway type when alcohol use is indicated in MVC, 2002-2004

Age (years)	Local Road	County Road	State Highway	Fed. Interstate
16-19	29 (58%)	11 (22%)	9 (18%)	1 (2%)
20-24	86 (55%)	25 (16%)	43 (28%)	2 (1%)
25-44	147 (59%)	30 (12%)	64 (26%)	9 (4%)
45-64	43 (52%)	20 (24%)	18 (22%)	2 (2%)
65-74	7 (78%)	0	1 (11%)	1 (11%)
75+	2 (100%)	0	0	0

Crash Location When Alcohol Use is Indicated, 16-24 year olds

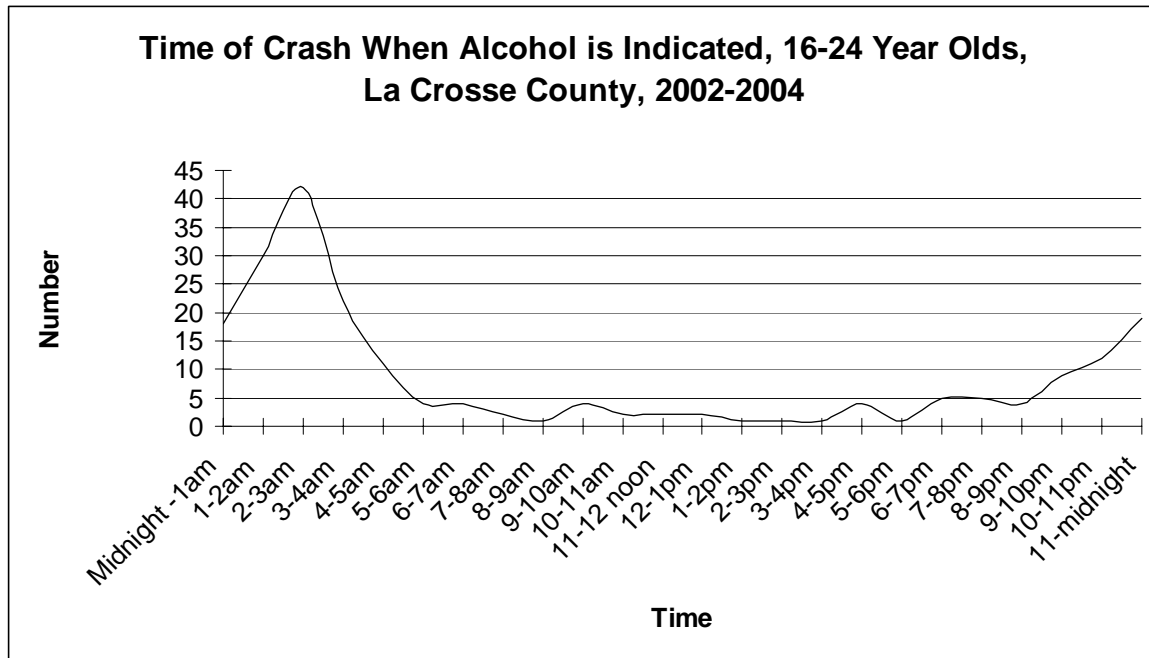
- 34% (70) of crashes took place at an intersection,
- 57% (117) at a non-intersection,
- 6% (13) in a parking lot and
- 3% (6) on private property.

Injury extent when alcohol use is indicated in MVC, 2002-2004

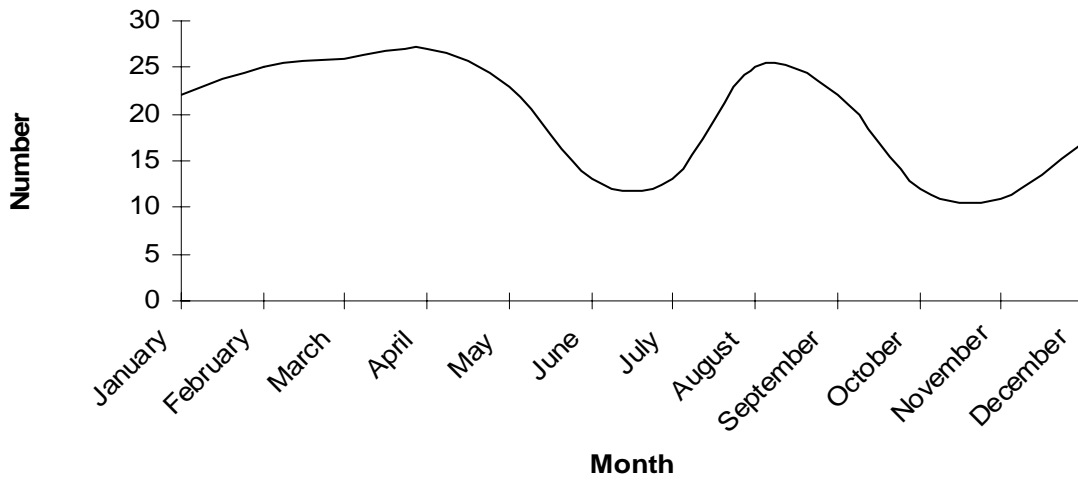
Age (years)	Fatal	Incapacitating	Potentially incapacitating	Non-incapacitating
16-19	0	4 (22%)	6 (33%)	8 (44%)
20-24	1 (2%)	7 (13%)	22 (42%)	23 (43%)
25-44	2 (3%)	13 (18%)	20 (28%)	37 (51%)
45-64	2 (7%)	2 (7%)	9 (31%)	16 (55%)
65-74	0	0	0	1 (100%)
75+	-	-	-	-

Number of visits and average hospital and emergency department (ED) charges when alcohol use is indicated

Age (years)	Hospital	ED
16-19	2 (\$6,448)	5 (\$1,204)
20-24	9 (\$16,596)	22 (\$881)
25-44	15 (\$17,868)	24 (\$829)
45-64	4 (\$22,104)	7 (\$912)
65-74	1 (\$3,389)	-
75+	-	-



**Crash Month When Alcohol is Indicated, 16-24 Year Olds,
La Crosse County, 2002-2004**



Part Two: Burden in the Community

The Environment

Liquor Licenses and Binge Drinking in Wisconsin

County	# Liquor License/100,000 Population (2003)	Binge Drink Rate (2000-2006 combined)	Binge Drink Rate Rank among 73 Counties
Buffalo	572.30	30.0	64
Clark	366.54	19.0	13
Crawford	521.95	21.3	21
Grant	445.59	28.0	59
Jackson	528.80	21.4	23
Juneau	542.85	21.0	19
La Crosse	314.60	26.1	51
Monroe	332.53	25.9	50
Richland	312.43	16.7	8
Sauk	470.80	24.7	39
Trempeleau	470.20	27.6	57
Vernon	338.61	26.6	54
State total	304.81	24.0	

Source: 2003 WI Alcohol Traffic Facts; 2007 County Health Rankings from the UW-Population Health Institute

Law Enforcement

Alcohol-related police calls 2006- August 2007

City of La Crosse	4,028
Campbell*	67
Bangor	Not available
Holmen*	40
West Salem*	65
Onalaska	Not available
La Crosse County Sheriff*	317

*primarily liquor law violations, operating while impaired, underage drinking

Alcohol related Police Activity for the City of La Crosse

Alcohol-related police calls 2006-August 2007

Age and Sex of Those Involved in Calls

Age	Female	Male	Total
17-20	1,004 (40%)	1,529 (60%)	2,533
21-24	135 (23%)	458 (77%)	593
25-64	221 (25%)	674 (75%)	895
65-83	3 (20%)	12 (80%)	15
Total	1,363 (34%)	2,673 (66%)	4,036

Age of Those Involved in Most Frequent Statute Violations (occurring greater than or equal to 10 times)

Statute description	17-20	21-24	25-64	65-83
Underage violations				
Underage Alcohol – 1 st Offense	1438 (99%)	0	0	0
Underage Alcohol – 2 nd Offense	275 (100%)	0	0	0
Underage Alcohol – 3 rd Offense	76 (100%)	0	0	0
Underage Alcohol – 4 th Offense	20 (100%)	0	0	0
Underage Drinking-Procures	88 (99%)	1 (1%)	0	0
Underage Liquor Violation	124 (78%)	6 (4%)	29 (18%)	0
Underage liquor Violation (2 nd)	17 (100%)	0	0	0
Underage Drinking-Possess/Consume	94 (100%)	0	0	0
Sell Alcohol to Underage Person	2 (11%)	15 (79%)	2 (11%)	0
Selling Beer to Minors	39 (19%)	74 (35%)	89 (43%)	7 (3%)
Sale of malt beverage to underage person	19 (28%)	14 (21%)	34 (50%)	1 (1%)
Selling Liquor to Minors/ Intoxicated P	19 (27%)	25 (35%)	26 (37%)	1 (1%)
False ID	114 (95%)	4 (3%)	2 (2%)	0
Identification Card Violations	21 (100%)	0	0	0
Intoxication violations				
Operating while Intoxicated	90 (10%)	276 (30%)	537 (59%)	5 (0.55%)
Public Consumption	21 (10%)	111 (54%)	73 (36%)	0
Public intoxication	2 (4%)	5 (10%)	43 (86%)	0
Violate absolute sobriety law	18 (100%)	0	0	0
Cause injury/operating while intoxicated	0	3 (25%)	9 (75%)	0
Operating with detectable amount of restricted substance	6 (43%)	4 (29%)	4 (29%)	0
Other violations				
No Bartenders License	1 (4%)	7 (28%)	17 (68%)	0
Fermented Malt Beverage License	18 (45%)	21 (53%)	1 (3%)	0
Keg registration violation	6 (35%)	9 (53%)	2 (12%)	0
Liquor license violation	5 (50%)	5 (50%)	0	0

College Campuses

Offenses Reported at Viterbo University 2003-2005

Offense	2003	2004	2005
Liquor Law Arrests	1	1	3
Liquor Law Violation Referred for Disciplinary Action	70	92	26

Violations Reported by University of Wisconsin La Crosse Police September 2005 – May 2006

66 alcohol or drug related violation calls:

- 13 of the 66 calls were detox transports to the hospital
- 3/13 detox transports were emergencies (life threatening)
- 6/13 of the detox transports were from dormitories
- 7/13 detox transports were within the campus jurisdiction
- 53/66 other calls were “welfare checks” in which students were not taken to detox
- 32/53 were cited for alcohol
- 6/53 were transported to either the University Health Center or hospital

Source: Chief Scott Rohde, UW-L Police

This report was a partnership of:

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Questions:

Injury Research Center at the Medical College of Wisconsin
Keri Briel Frisch, MS
414-456-7655
kfrisch@mcw.edu