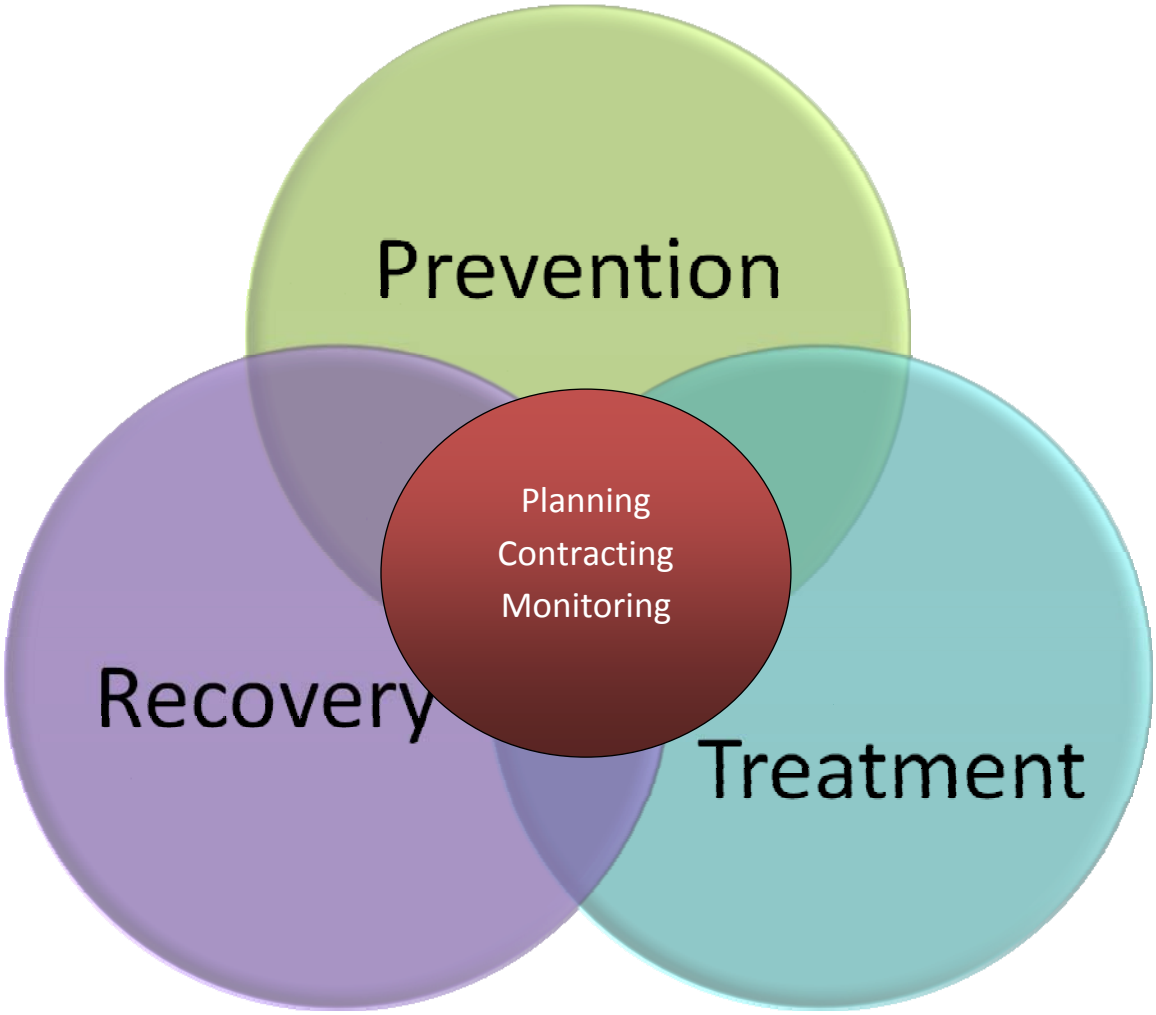
2010

Macomb County Office of Substance Abuse



ASSESSING THE BURDEN OF ILLICIT DRUGS AND ALCOHOL ABUSE:

A Focus on Heroin and Prescription Drug Abuse

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PART II

ASSESSING THE BURDEN OF ALCOHOL ABUSE: A FOCUS OF ALCOHOL RELATED TRAFFIC CRASHES AND UNDERAGE DRINKING

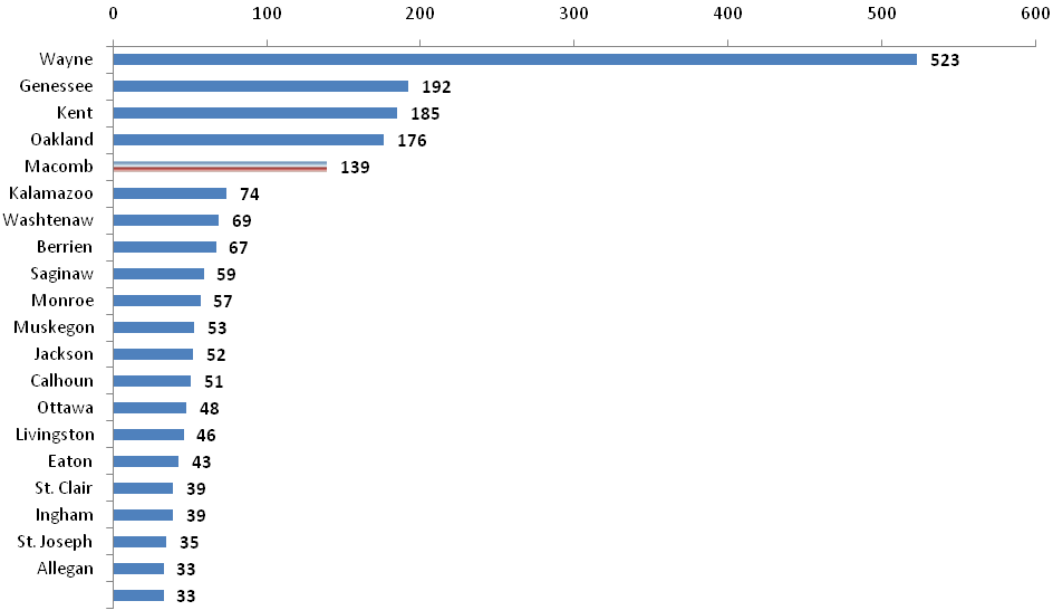
ALCOHOL RELATED TRAFFIC CRASHES, FATALITIES, AND INJURIES

In 2007, Macomb County developed a strategic plan via the Strategic Prevention Framework, State Incentive Grant (SPFSIG) which set forth four goals to assess the impact made over time towards reducing the burden of alcohol related consequence, and specifically alcohol related traffic crash deaths and underage drinking. These goals are 1) To decrease alcohol related traffic crash deaths in Macomb County; 2) To decrease over time the number of Driving Under the Influence arrests in Macomb County (especially for teenagers and young adults); 3) To decrease alcohol use among middle school and high school students; 4) To decrease alcohol use among 18-20 year olds. This section of the report reviews key indicators that would measure the impact of concerted efforts to address these problems over time.

ALCOHOL-RELATED TRAFFIC CRASH FATALITIES

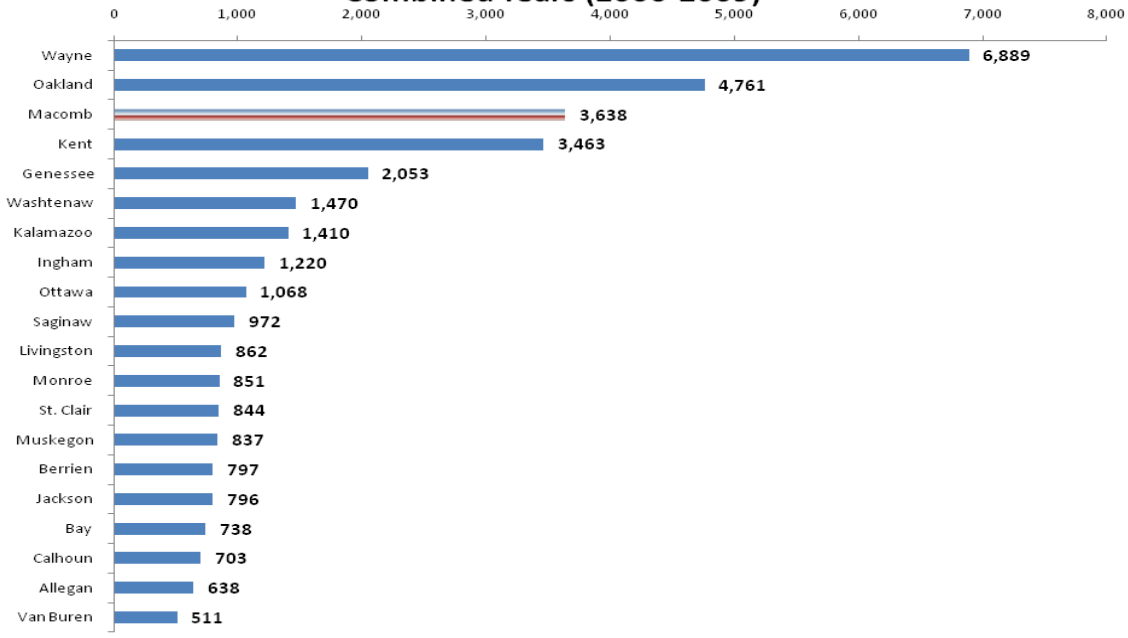
The Michigan Traffic Crash Facts conducts surveillance on factors related to traffic crashes Statewide and for Michigan counties and cities. Overall, alcohol related traffic crash fatalities and injuries have been on a steady decline, Statewide. In 2009, there were 613 persons killed or seriously injured in Michigan, a 17.4 percent decrease in fatalities, Statewide. Macomb County data shows similar trends in alcohol related fatalities. For the period of 2001-2005, Macomb County ranked third behind Wayne and Oakland counties for the highest number of fatalities or serious injuries (605 total fatalities or an average of 121 fatalities or serious injuries per year) for that time period in Michigan. **Figure 1** illustrates the number of person killed or seriously injured by county for the period of 2006-2009. The data shows that for this period, Macomb County ranked fifth during the four year period, a total of 139 fatalities (an average of 35 fatalities or serious injuries per year) and succeeded by Wayne (523 fatalities or injuries), Genesee (192 fatalities or injuries), Kent (185 fatalities or injuries) and Oakland (176 fatalities or injuries) counties. However in 2009, Macomb County however ranked third again for number of alcohol related traffic crash fatalities with 19 total fatalities.

Figure 1.
Top 20 County Ranks - Number of Persons Killed or Seriously Injured in Alcohol-related Traffic Crashes, 2006-2009



Source: Michigan Traffic Crash Facts, 2006-2009

Figure 2:
Top 20 County Ranks - Alcohol-related Traffic Crashes Combined Years (2006-2009)

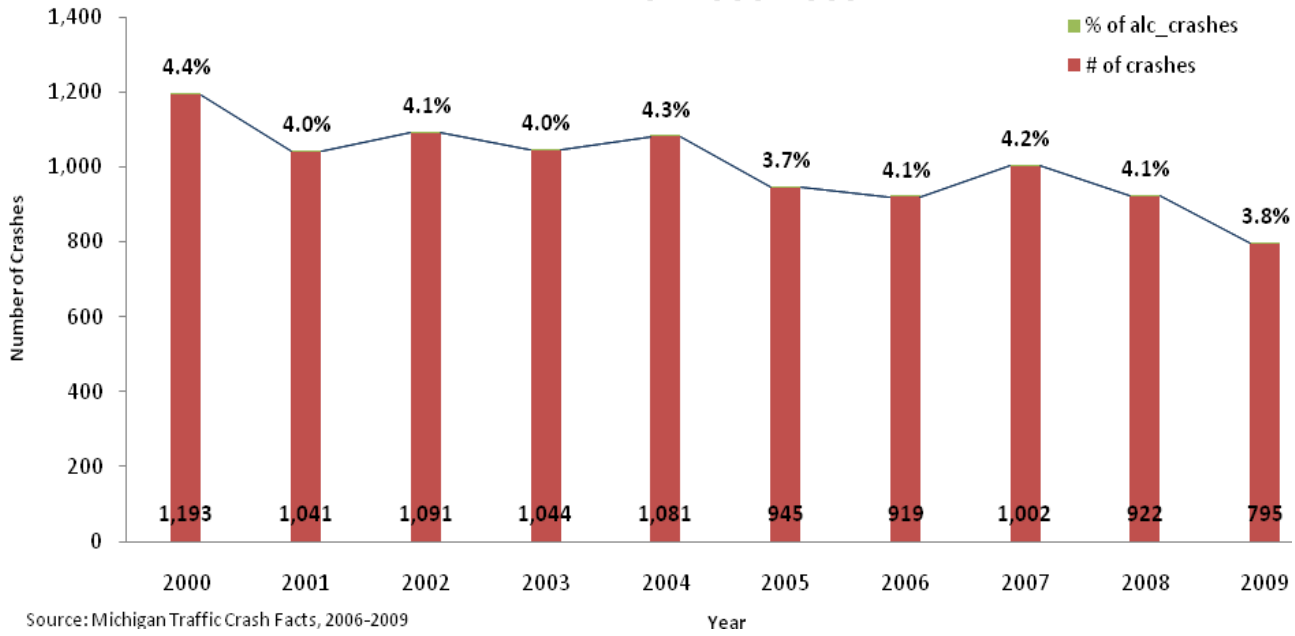


Source: Michigan Traffic Crash Facts, 2006-2009

ALCOHOL-RELATED TRAFFIC CRASHES

Although Macomb County has experienced a significant reduction in the number of alcohol related fatalities and serious injuries per year since 2005, decline in the number of alcohol related traffic crashes have been unstable over the past 10 years. **Figure 3** illustrates the number of alcohol related traffic crashes by year since the year 2000. The data shows the number of alcohol related crashes has been on an unstable decline with 945 reported crashes in 2005, a 12.5 percent decrease from the previous year; 1,002 reported crashes in 2007, an 8.2 percent increase from the previous year; and 795 reported crashes in 2009, a 13.7 decrease from 2008. Overall the data shows that there is significant difference in the number of fatalities and serious injuries between the periods of 2002-2005 and 2006-2009, a 71 percent decrease in fatalities and injuries; and although a reduction, there was less notable differences in the number of alcohol related traffic crashes between the two periods; a 12.5 percent decrease in alcohol related traffic crashes. **Figure 3** also shows that approximately four (4) percent of all crashes each year were alcohol related.

Figure 3.
Macomb County
Number and Percent of Alchol-related Traffic Crashes by Year
CY 2000-2009



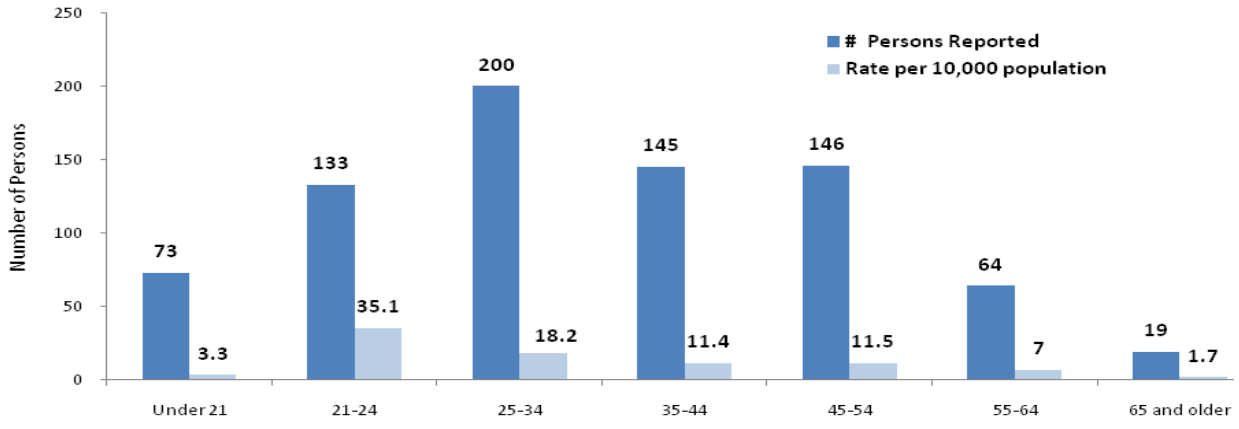
Source: Michigan Traffic Crash Facts, 2006-2009

DRINKING AND DRIVING BY AGE

According to the 2009 Michigan Traffic Crash Facts, persons aged 21-24 years reported being the drinking driver in alcohol related crashes at a higher rate than other age groups. **Figure 4** illustrates that in 2009, 133 persons aged 21-24 years, a rate of 35.1 crashes per 10,000 population were reported as the drinking driver in alcohol involved crashes in the County. Persons aged 25-34 years reported the second highest rate at 18.2 crashes per 10,000 population (200 total drivers). There were 73 persons under the age of 21 who were reported as the drinking driver in alcohol related traffic crashes.

The 2009 data identifies similar high risk age groups for drinking drivers when compared to 2005. In 2005, persons aged 21-24 years were also reported at a higher rate as being the drinking driver in alcohol related traffic crashes, a rate of 51.7 crashes per 100,000 population (234 crashes). There were 167 persons under the age of 21 who were reported as being the drinking driver in alcohol related traffic crashes. Overall, there were decreases in drinking and driving by all age groups when compared to the 2005 data.

Figure 4.
Macomb County
Reported Age of Drinking Drivers Involved in Crashes,
Number and Rate by Age Group Reported, 2009



Source: Michigan Traffic Crash Facts, 2009
US Census Bureau., 2009 Estimates

ALCOHOL RELATED TRAFFIC CRASHES BY LOCATION

According to the 2009 Office of Highway Safety, Michigan Traffic Crash Report, a large proportion of alcohol related traffic crashes occurred around the southwest part of the County. The city of Warren, the most populous city, ranked highest for the number of alcohol related traffic crashes with 125 reported crashes **(Table 1).** There were 147 alcohol related traffic crashes reported in Warren during 2005, a 15 percent decrease. Consistent with the 2005 trend, Clinton Township ranked second with 119 reported crashes in 2009, however, there were no decreases from the 2005 number of 118 report alcohol related traffic crashes. There were 95 reported crashes in Sterling Heights, a decrease from 108 in 2005; 57 crashes in Roseville, a decrease from 73 crashes in 2005; and 53 reported crashes in Shelby Township, an increase from 47 reported alcohol related traffic crashes in 2005. Overall, there were decreases in alcohol related traffic crashes by most cities when the year 2005 was compared to 2009.

Table 1.
Macomb County
Alcohol-related Traffic Crashes by City, 2009
795 Total Crashes

Rank	City/ Township	# of Crashes	Rank	City/Township	# of Crashes
1	Warren	125	**14**	Bruce Twp	8
2	Clinton Twp	119	**14**	Centerline	8
3	Sterling Heights	95	**14**	Ray Twp	8
4	Roseville	57	**15**	Richmond Twp	7
5	Shelby Twp	53	**16**	Armada Twp	6
6	St. Clair Shores	51	**16**	New Baltimore	6
7	Chesterfield Twp	50	**17**	New Haven	4
8	Harrison Twp	44	**18**	Lenox Twp	2
8	Macomb Twp	44	**18**	Romeo	2
9	Mt. Clemens	38	**19**	Grosse Pointe Shores	1
10	Eastpointe	28	**19**	Richmond	1
11	Utica	15	**20**	Armada	0
12	Washington Twp	12	**20**	Lake Twp	0
13	Frazer	11	**20**	Memphis	0

Source: Office of Highway Safety, Michigan Facts Traffic Crash Facts, 2009

ALCOHOL RELATED TRAFFIC FATALITIES BY LOCATION

There were a total of 19 alcohol related traffic crash fatalities in Macomb County in 2009 *(Office of Highway Safety Planning, 2005-2009)*. By cities, Clinton Township ranked number one with five (5) total fatalities, followed by Roseville and Warren, both reporting four (4) alcohol related traffic crash

fatalities. There were two (2) alcohol related fatalities reported in Washington Township and one (1) reported in Centerline, Macomb Township, Shelby Township, and Sterling Heights.

Table 2:
Macomb County
Alcohol-related Traffic Fatalities by City, 2009
19 Total Fatalities

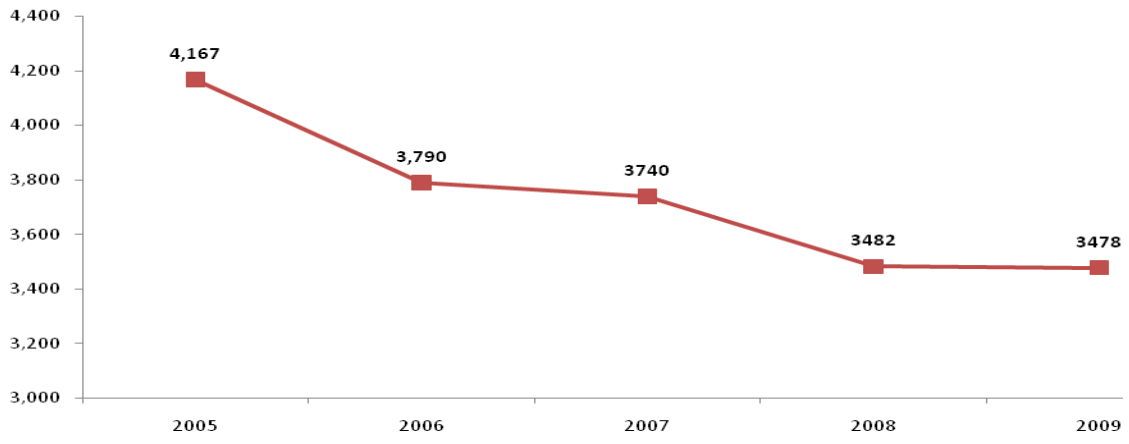
Rank	City	# Fatalities
1	Clinton Twp	5
2	Roseville	4
2	Warren	4
3	Washington Twp	2
4	Centerline	1
4	Macomb Twp	1
4	Shelby Twp	1
4	Sterling Heights	1

Source: Office of Highway Safety Planning, Michigan Traffic Crash Facts, 2009
Note: Data are presented for alcohol related deaths only. Data does not include persons who experienced serious injuries

DRIVING UNDER THE INFLUENCE ARRESTS

Trend data shows substantial progress towards reducing the number DUI arrests in Macomb County (Michigan Drunk Driving Audit, 2005-2009). **Figure 5** shows a steady decline in DUI arrests since 2005, a 16.5 percent decrease in the number of arrests. Macomb County, however, remains third in the State for counties with the highest number of DUI arrests behind Wayne and Oakland counties.

Figure 5.
Macomb County
Number of Drinking While Driving Arrests, 2005 - 2009



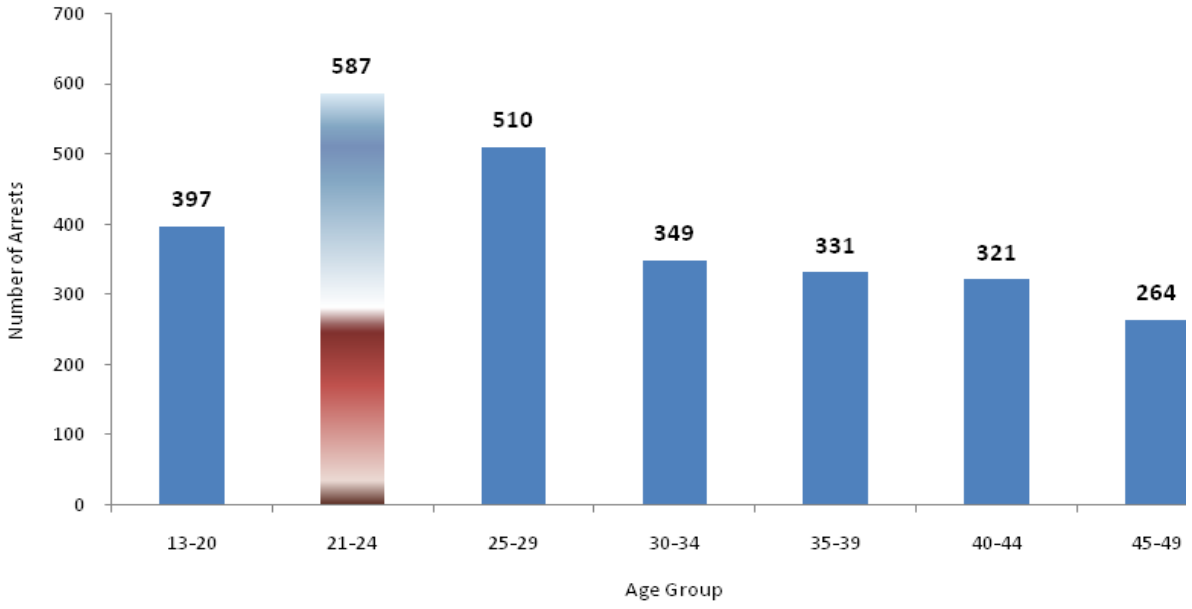
Source: Michigan Drunk Drinking Audit, 2005-2009

ARRESTS BY AGE

The Michigan Uniformed Reporting System (UCR) provides data by age, gender, jurisdictions and selected causes of arrests. The most recent available data (2006) shows that persons aged 21-24 years had the highest number of DUI arrests when compared to other age groups. **Figure** 6 shows that there were 587 DUI arrests among this age group, a decrease from 657 arrests in 2005. Persons aged 25-29 years presented the second highest number of DUI arrests with a total 510 arrest, a decrease from 587 arrests in 2005. Trends showing high risk age groups for DUI arrests were consistent between 2005 and 2006.

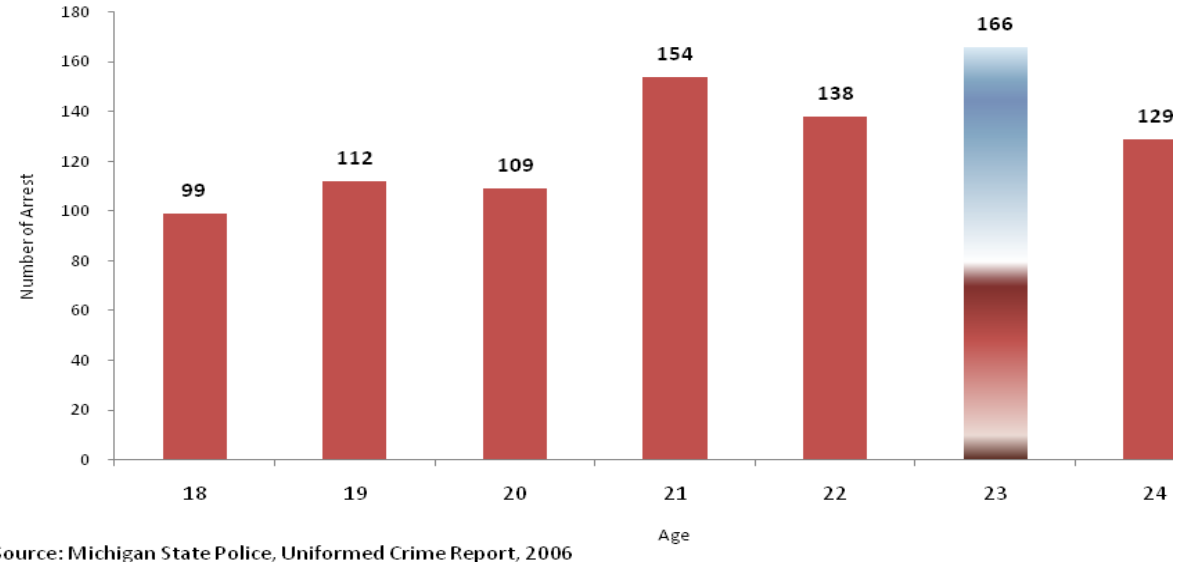
Figure 7 shows that of persons 18 -24 year olds, 23 year olds were reported with the highest number of arrests (166 total) in 2006. This was an increase from the 2005 total of 141 total arrests. There was also an increase in the number of DUI arrests among persons 18 years of age, 86 arrests in 2005 and 99 arrests in 2006; a decrease among persons 19 years of age, 123 arrests in 2005 and 112 arrests in 2006; and no difference among persons 20 years of age, 108 in 2005 and 109 in 2006. Overall, the number of arrests for persons aged 13-20 years (underage drinkers) increased by 29 percent from a total of 308 arrests in 2005 to 397 in 2006. More recent data is needed for this indicator to effectively evaluate changes to date.

Figure 6.
Macomb County
Number of Driving Under the Influence of Alcohol Arrests, 2006



Source: Michigan State Police, Uniformed Crime Report, 2006

Figure 7.
Macomb County
Number of Driving Under the Influence (DUI) of Alcohol Arrests by Age, 2006

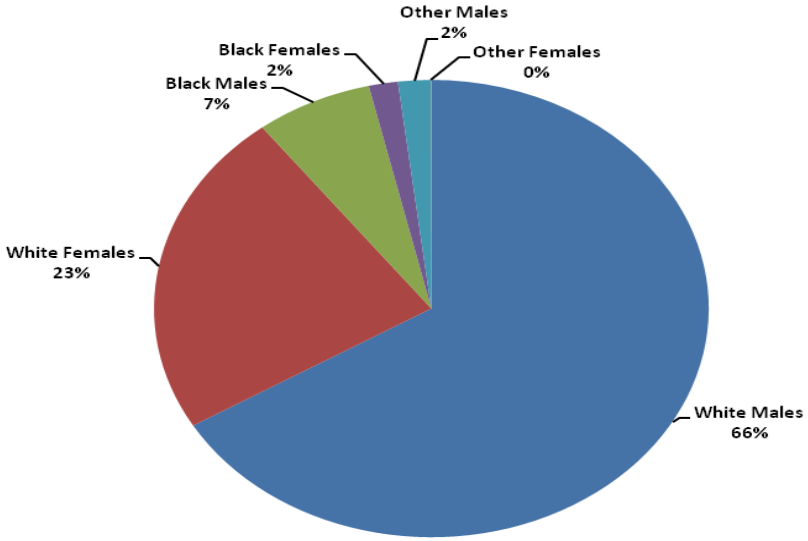


Source: Michigan State Police, Uniformed Crime Report, 2006

ARRESTS BY RACE

Figure 8 illustrates the percentage of DUI arrest by race and gender. The data shows that in 2006, 66 percent of the DUI arrests were among white males, a lesser proportion when compared to 2005 (76 percent). The percentage of DUI arrests by white females increased by two (2) percent from 21 percent in 2005 to 23 percent in 2006. Seven (7) percent of the arrests were among black males and two (2) percent were among black females in 2006.

Figure 8.
Macomb County
Percent Driving Under the Influence of Alcohol Arrests, 2006



Source: Michigan State Police, Uniformed Crime Report, 2006

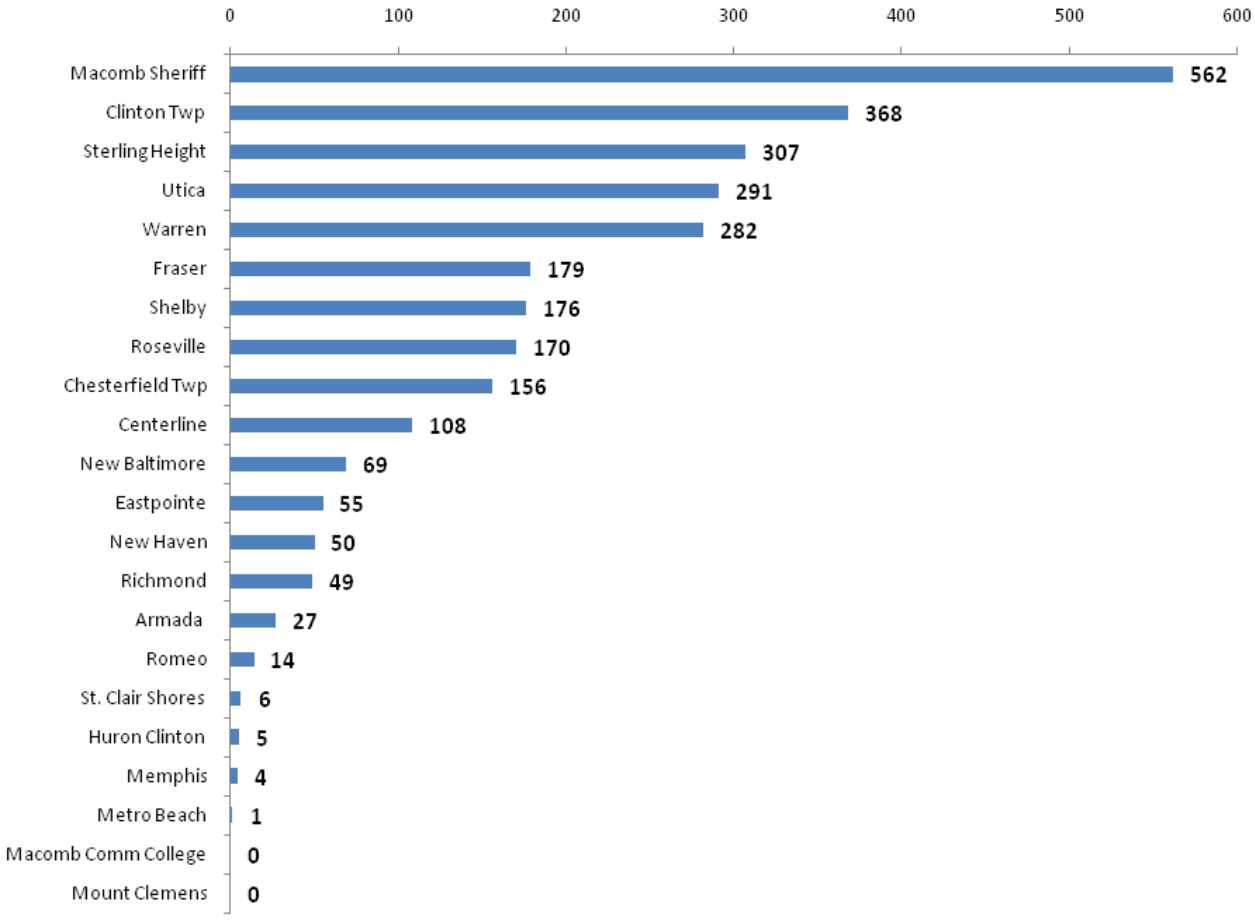
ARRESTS BY LOCATION

Figure 9 shows the number of DUI arrests by Macomb County Police Department. According the Michigan Uniform Crime Report (2006), the Macomb County Sheriff's Department reported the most number of DUI arrests at 562 arrests, a decrease from 749 in 2005. Among Macomb cities, Clinton Township Police Department made the highest number of DUI arrests (368 total arrests), a decrease from 400 arrests in 2005. Sterling Heights Police Department made the second highest number of DUI arrests (307), a decrease from 333 arrests in 2005. The city of Warren made fewer arrests in 2006 (282 arrests) when compared to 2005 (475 arrests).

Figure 10 shows the number of underage drinking arrests by Macomb County Police Department. The data shows that 68 arrests were made by the Macomb Sheriff Department in 2006, a decrease from 2005 (73 total arrests). Clinton Township Police Department made the highest number of DUI arrests among minors (43 arrests) in 2006, an increase from 34 arrests in 2005. Sterling Heights also had an increase in the number of DUI arrests among minors from 26 arrests in 2005 to 40 arrests in

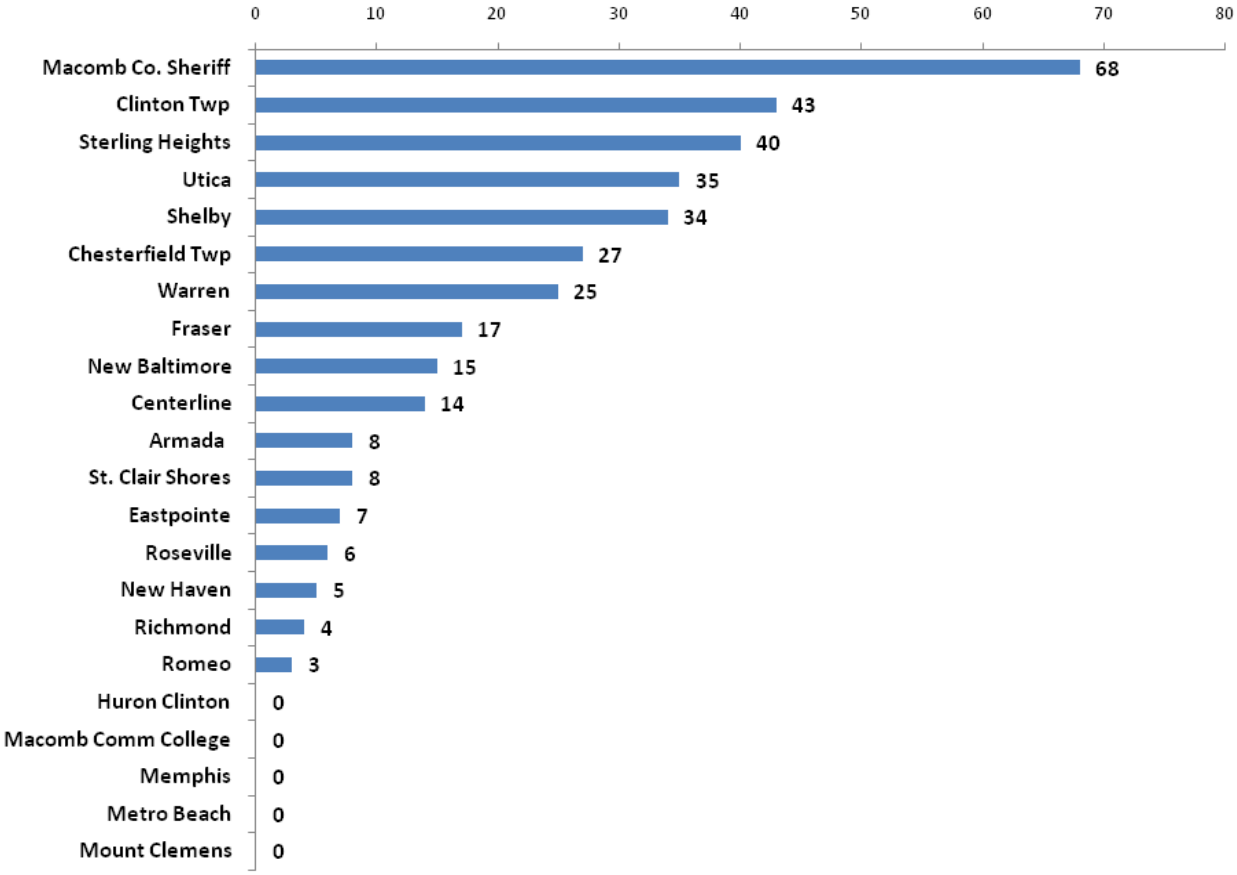
2006. The city of Utica Police Department made 24 DUI arrests among minors in 2005 and 35 arrests in 2006. There was a decrease in number of DUI arrests to minors in Warren, 36 arrests in 2005 and 25 arrests in 2006. The increases in number of arrests made to minors by Police Department may be due to efforts to crack down on underage drinking and driving activities in the County. More recent data is needed to effectively evaluate the results of these efforts to date.

Figure 9. Macomb County Number of Driving Under the Influence (DUI) of Alcohol Arrests by Police Department, 2006



Source: Michigan State Police, Uniformed Crime Report, 2006

Figure 10.
Macomb County Number Driving Under the Influence (DUI) Arrests of Underage Drinkers (13-20 years) by Police Department, 2006



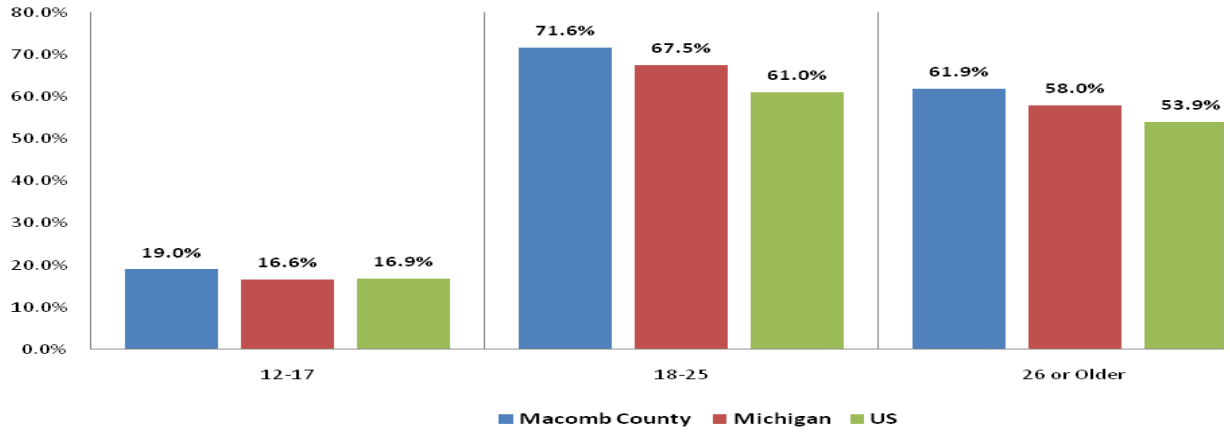
Source: Michigan State Police, Uniformed Crime Reports, 2006

UNDERAGE DRINKING

The National Survey on Drug Use and Health (NSDUH) provides sub-State estimates for alcohol and illicit drug use for adult and youth populations. The most recent sub-State level data available is for the 2004-2006 timeframe. More current data illustrating alcohol consumption patterns are available for youth populations via the Michigan Profile on Healthy Youth (MiPHY) and the Youth Risk Behavioral Surveys (YRBS), these estimates will be used to describe consumption patterns for high school and middle school populations.

Current use of alcohol is having one or more drinks within the past 30 days. The NSDUH survey reported increases in current alcohol use among by all age groups in Macomb County when compared to the period of 1999-2001. Macomb County residents also reported higher alcohol use when compared to the State and National rates. **Figure 11** shows that for the period of 2004-2006, 19 percent of youth aged 12-17 years reported current use of alcohol, an increase from the 1999-2001 rate of 18.6 percent; 71 percent of persons aged 18-25 years also reported higher current alcohol use during 2004-2006 compared to 1999-2001 (63.8 percent), an 11.3 percent increase in current use; and 61.9 percent of persons 26 years or older reported current use of alcohol, a rate higher than the 1999-2001 rate of 54.9 percent.

Figure 11.
Past Month Use of Alcohol by Age, US, Michigan, and Macomb County, 2004-2006



Source: National Survey on Drug Use and Health, Substate Estimates, 2004-2006
Note: Estimates represented are from combined calendar years 2004, 2005, and 2006

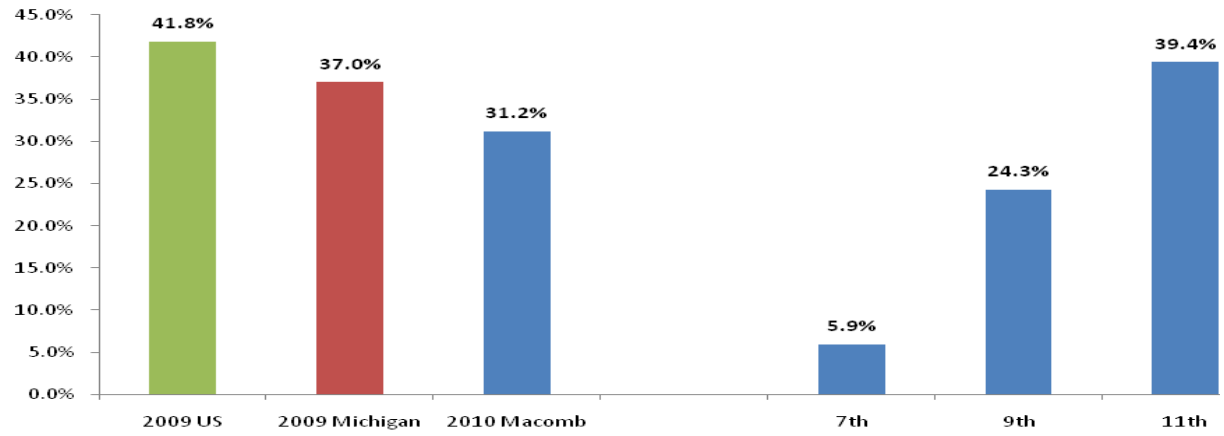
ALCOHOL USE BY GRADE

Findings from the 2010 MiPHY survey for Macomb County shows that 31.2 percent of high school students in Macomb reported current use of alcohol, this is a decrease from 2008 rates of 42.8 percent.

Figure 12 compares current use rates of Macomb students to the Statewide and national rates in 2009. The data shows that current use rates for both Michigan (37 percent) and the U.S. (41.8 percent) were higher than Macomb County. In 2010, 5.9 percent of 7th graders, 24.3 percent of 9th graders and 39.4 percent of 11th graders reported current use of alcohol in Macomb County.

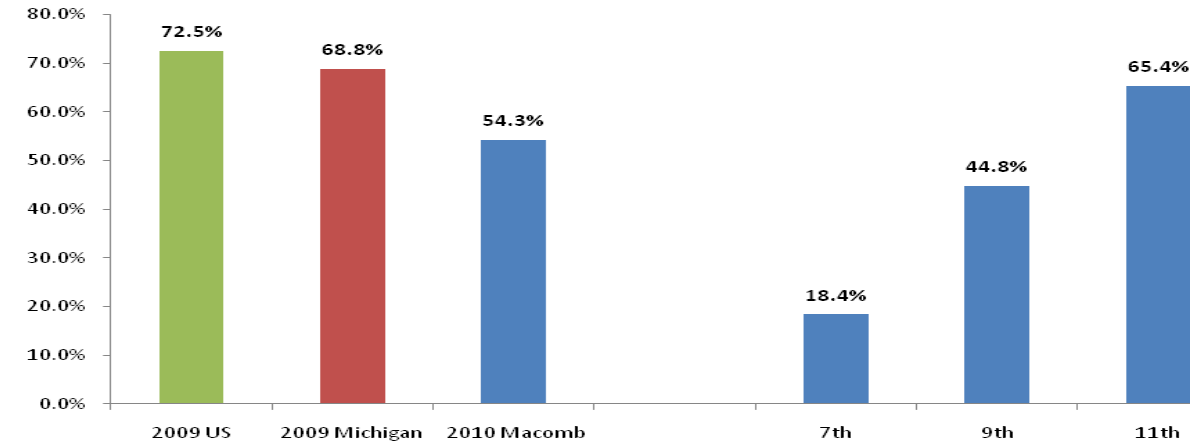
Lifetime use of alcohol is defined as ever having drank alcohol in your lifetime. **Figure 13** shows the percentage of students who reported ever drinking alcohol in their lifetime. In 2010, 54.3 percent of Macomb students reported lifetime use of alcohol; this rate is lower than the Statewide (68.8 percent) and national (72.5 percent) rates from the 2009 YRBS survey. In 2008, 59.1 percent of students reported lifetime use of alcohol in Macomb County.

Figure 12.
Past Month Use of Alcohol by Grade, US, Michigan, and Macomb County, 2010



Source: Michigan Profile for Healthy Youth, Macomb County Estimates, 2010
Youth Risk Behavioral Survey, US and Michigan Estimates, 2009

Figure 13.
Lifetime Use of Alcohol by Grade, US, Michigan, and Macomb County, 2010



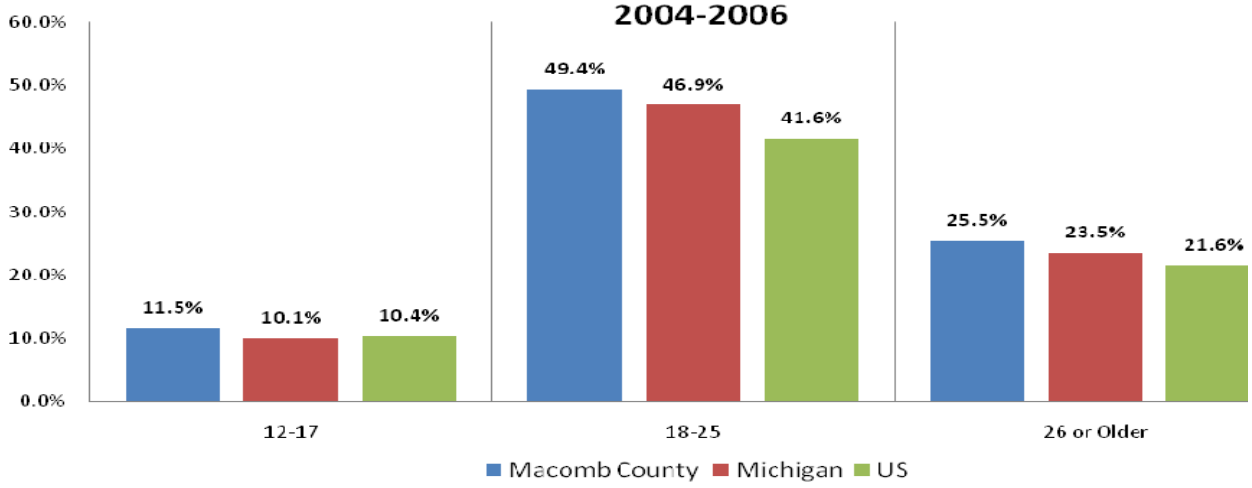
Source: Michigan Profile for Healthy Youth, Macomb County Estimates, 2010
Youth Risk Behavioral Survey, US and Michigan Estimates, 2009

BINGE DRINKING

Binge drinking is defined as having 5 or more drinks in one setting. It has been correlated with many adverse health and social consequences including death and injury as a result of alcohol related traffic crashes and arrests. According to the 2004-2006 NSDUH, binge drinking has increased among persons aged 18-25 years, from 41.7 percent during 1999-2001 to 49.4 percent during 2004-2006. Rates also increased for persons aged 26 or older, from 19.5 percent during 1999-2001 to 25.5 percent during 2002-2004. **Figure 14** shows a higher percentage of binge drinking reported among persons aged 18-25 years, followed by persons age 26 or older. The data also shows that reported binge drinking rates was higher among Macomb County residents when compared to the Statewide and national rates for all age groups.

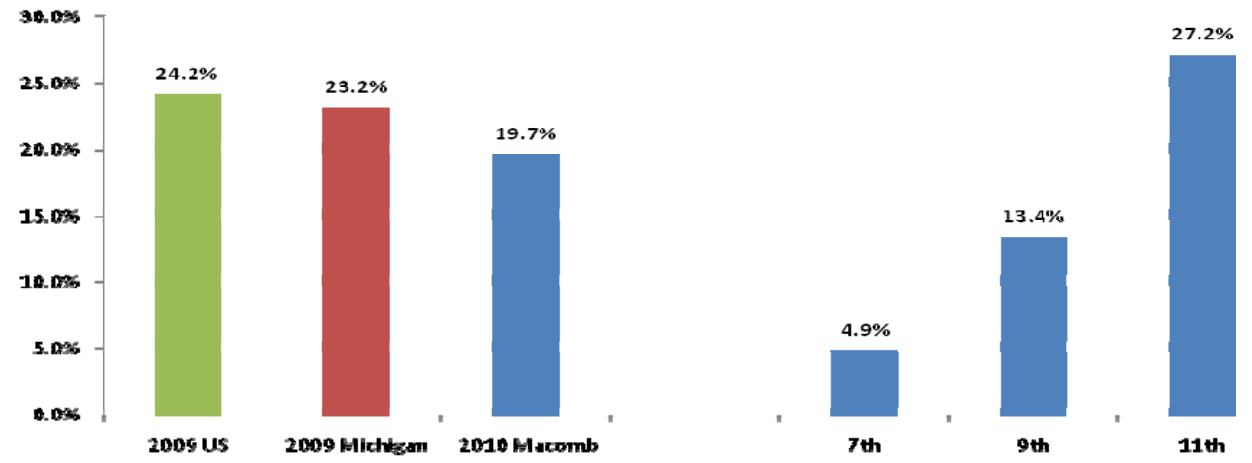
Figure 15 illustrates binge drinking behavior by grade. The data shows that 19.7 percent of students in Macomb County reported current binge drinking behaviors, a decrease from the 2008 rates of 23 percent. Students in the 11th grade reported higher binge drinking behaviors at 27.2 percent, followed by 9th graders (13.4 percent), and 7th graders (4.9 percent). Macomb youth reported lower percentage of binge drinking when compared to the State (23.2 percent) and national (24.2 percent) rates.

Figure 14.
Past Month Binge Drinking by Age, US, Michigan, and Macomb County, 2004-2006



Source: National Survey on Drug Use and Health, Substate Estimates, 2004-2006
Note: Estimates represented are from combined calendar years 2004, 2005, and 2006

Figure 15.
Past Month Binge Drinking by Grade, US, Michigan, and Macomb County, 2010



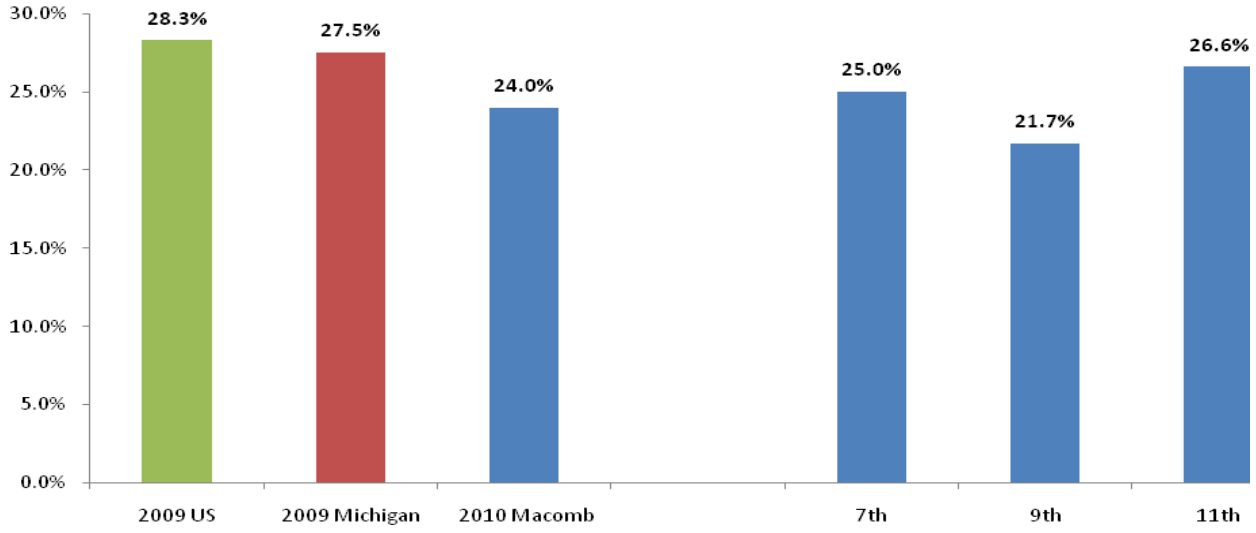
Source: Michigan Profile on Healthy Youths (MIPHY), Macomb County Estimates
Youth Risk Behavioral Factor Survey (YRBS), US and Michigan rates
*Binge drinking is described as having 5 or more alcoholic drinks in row within the past 30 days

DRINKING AND DRIVING AND RIDING BEHAVIORS

Figure 16 shows that 24 percent of Macomb County students reported riding with someone who had been drinking, a decrease from 27.3 percent in 2008. Statewide, 28.3 percent of students reported riding with someone who had been drinking; 27.5 percent of students reported this behavior nationally. By grade, 11th graders reported higher percentage of riding with someone who had been drinking (26.6 percent); followed by 7th graders (25 percent) and 9th graders (21.7 percent) in Macomb County.

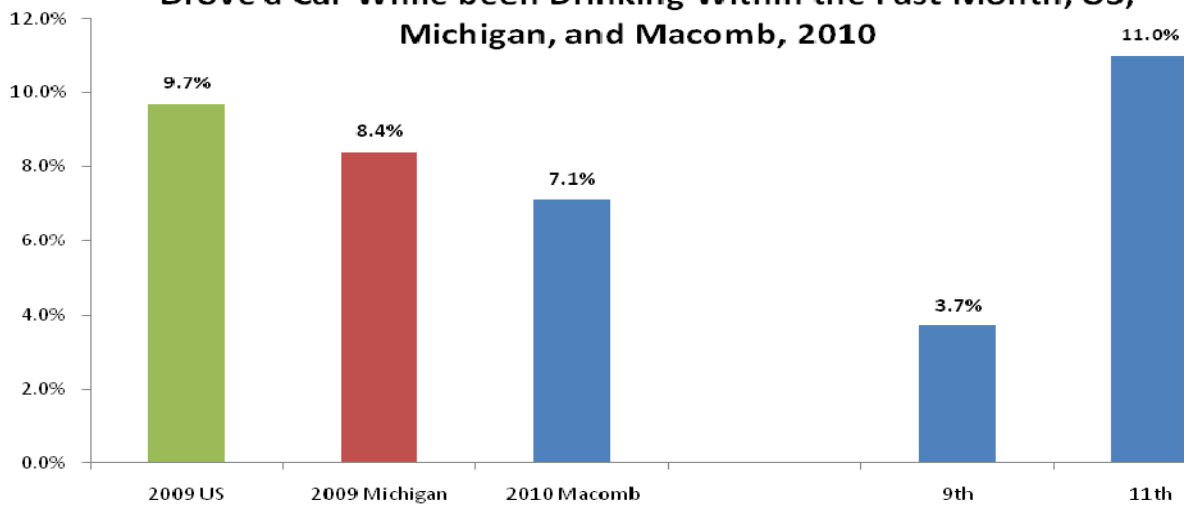
Figure 17 shows that 7.1 percent of students in Macomb County reported drinking and driving behaviors in 2010, a decrease from the 2008 rate of 9.4 percent; this rate was also lower than both the State (8.4 percent) and the national (9.7 percent) rates. Students in the 11th grade reported higher rates of drinking and driving behaviors (11 percent) when compared to those in the 9th grade (3.7 percent).

Figure 16.
Rode in a Car by Someone Who had been Drinking Alcohol with the Past Month, US, Michigan, and Macomb County, 2010



Source: Michigan Profile for Healthy Youth, Macomb County Estimates, 2010
Youth Risk Behavioral Survey, US and Michigan Estimates, 2009

Figure 17.
Drove a Car While been Drinking Within the Past Month, US, Michigan, and Macomb, 2010



Source: Michigan Profile for Healthy Youth, Macomb County Estimates, 2010
Youth Risk Behavioral Survey, US and Michigan Estimates, 2009
Note: Data was not available for grade 7th

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TABLES

Table 1. Macomb County Number of Drug-related Deaths by Selected Drug Category, 2004-2008					
Drug Type	**2004**	**2005**	**2006**	**2007**	**2008**
Alcohol-induced deaths	---	5	14	26	22
Cocaine	12	19	12	18	12
Heroin	16	20	34	22	52
Prescription Drug	10	23	26	22	13
Methadone	---	9	6	---	8
Stimulants (Amphetamines and Methamphetamines	---	9	6	---	8
Michigan Department of Community Health, Division of Vital Statistics, 2004-2008 Note: Populations with less than five deaths are represented with "---"					

Table 2: Number and Rates of Heroin Poisoning Deaths by Gender, Age, and Year (Rate per 100,000 population)								
	Population	**2004**	**2005**	**2006**	**2007**	**2008**	**# of deaths 2004-2008**	**Death rates 2004-2008**
Males	407,903	13	19	27	19	39	117	5.74
Females	421,533	---	---	7	---	13	29	1.38
Under 21 yrs	223,589	---	---	---	---	5	11	1.00
21-24 yrs	37,923	---	6	5	---	5	17	8.97
25-34 yrs	109,696	---	---	6	6	14	32	5.83
35-44 yrs	126,334	5	11	6	---	14	38	6.01
45-64 yrs	219,313	6	---	15	12	14	48	4.37
Michigan Department of Community Health, Division of Vital Statistics, 2004-2008 Note: Populations with less than five deaths are represented with "---"								

Table 3: Heroin Poisoning Hospitalizations by Gender, Age, and Year, (Rate per 100,000 Population)							
	2004	**2005**	**2006**	**2007**	**2008**	**# of hospitalizations 2004-2008**	**Hospitalization rates 2004-2008**
Males	16	27	41	20	44	105	25.7
Females	8	21	21	13	21	55	13.0
15-24 yrs	5	12	22	11	24	57	55.9
25-44 yrs	16	25	25	14	27	66	28.0
45-64 yrs	---	11	14	8	14	36	16.4
Michigan Department of Community Health, Michigan Inpatient Files, 2004-2008 Note: Populations with less than five deaths are represented with "---"							

Table 4: Number and Rate of Prescription Pain Reliever Poisoning Deaths by Gender, Age, and Year, (Rate per 100,000 Population)								
	Population	**2004**	**2005**	**2006**	**2007**	**2008**	**# of deaths 2004-2008**	**Death rates 2004-2008**
Males	407,903	6	15	19	10	7	57	2.8
Females	421,533	---	8	7	9	6	34	1.6
25-34 yrs	109,696	---	---	9	---	---	17	3.1
35-44 yrs	126,334	---	13	6	---	---	30	4.8
45-64 yrs	219,313	---	16	9	11	6	42	3.8
Michigan Department of Community Health, Division of Vital Statistics, 2004-2008 Note: Populations with less than five deaths are represented with "---"; populations with zero deaths are represented with the number zero								

Table 5: Prescription Pain Reliever Hospitalizations by Gender, Age, and Year, (Rate per 100,000 population)							
	2004	**2005**	**2006**	**2007**	**2008**	**# of hospitalizations 2004-2008**	**Hospitalizations rates 2004-2008**
Male	42	27	35	42	54	200	6.4
Female	68	73	46	46	74	307	7.9
under 15	---	---	---	---	---	8	1
15-24 yrs	17	11	12	7	11	58	5.9
25-44 yrs	40	43	27	38	38	186	8.7
45-64 yrs	39	34	33	41	57	204	12
65 yrs and over	13	11	11	26	26	87	11.2
Michigan Department of Community Health, Michigan Inpatient Files, 2004-2008 Note: Populations with less than five deaths are represented with "---"							

Table 6: Number and Rate of Heroin Poisoning Deaths by Macomb Zip Codes and Cities, 2004-2008 Combined Years (Rate per 100,000 population)

ZIP Code	City	2007 Population	# of deaths 2004-2008	Death rates 2004-2008
48021	Eastpointe	33403	8	4.8
48035	Clinton Township	35216	7	4.0
48038	Clinton Township	42309	6	2.8
48043	Mount Clemens	17289	8	9.3
48066	Roseville	49123	14	5.7
48080	Saint Clair Shores	23543	5	4.2
48089	Warren	34760	11	6.3
48091	Warren	32238	13	8.1
48093	Warren	22929	6	5.2
48310	Sterling Heights	43051	5	2.3
48313	Sterling Heights	35421	5	2.8
48316	Utica	24820	5	4.0

Table includes communities with five or more deaths occurring during the period of 2004-2008

Table 7: Number and Rate of Heroin Poisoning Hospitalizations by Macomb Zip Codes and Cities, 2004-2008 Combined Years (Rate per 100,000 population)

ZIP CODE	City	2007 Population	# of hospitalizations 2004-2008	Hospitalization rates 2004-2008
48015	Center Line	8526	6	14.1
48021	Eastpointe	33403	21	12.6
48026	Fraser	15552	10	12.9
48035	Clinton Township	35216	9	5.1
48038	Clinton Township	42309	6	2.8
48043	Mount Clemens	17289	6	6.9
48045	Harrison Township	26131	7	5.4
48047	New Baltimore	38522	7	3.6
48065	Romeo	10807	5	9.3
48066	Roseville	49123	25	10.2
48080	Saint Clair Shores	23543	5	4.2
48081	Saint Clair Shores	22220	7	6.3
48082	Saint Clair Shores	17495	5	5.7
48088	Warren	22583	11	9.7
48089	Warren	34760	25	14.4
48091	Warren	32238	18	11.2
48092	Warren	25802	13	10.1
48093	Warren	22929	7	6.1
48310	Sterling Heights	43051	9	4.2
48312	Sterling Heights	33721	8	4.7
48313	Sterling Heights	35421	7	4.0
48314	Sterling Heights	21485	6	5.6
48316	Utica	24820	5	4.0
48317	Utica	28234	12	8.5

Table includes communities with five or more hospitalizations occurring during the period of 2004-2008

Table 8: Number and Rates of Prescription Pain Reliever Poisoning Deaths by Macomb Zip Codes and Cities, 2004-2008 Combined Years (Rate per 100,000 population)

Zip Code	City	2007 Population	# of deaths 2004-2008	Death rates 2004-2008
48021	Eastpointe	33403	9	5.4
48036	Clinton Township	22358	8	7.2
48042	Macomb	24170	6	5.0
48066	Roseville	49123	12	4.9
48088	Warren	22583	6	5.3
48089	Warren	34760	8	4.6
48310	Sterling Heights	43051	6	2.8

Table includes communities with five or more deaths occurring during the period of 2004-2008

Table 9: Number and Rate of Prescription Pain Reliever Poisoning Hospitalizations by Macomb Zip Codes and Cities, 2004-2008 Combined Years (Rate per 100,000 population)				
ZIP CODE	**City**	**2007 Population**	**# of Hospitalizations 2004-2008**	**Hospitalizations rates 2004-2008**
48015	Center Line	8526	10	23.5
48021	Eastpointe	33403	44	26.3
48026	Fraser	15552	11	14.1
48035	Clinton Township	35216	28	15.9
48036	Clinton Township	22358	15	13.4
48038	Clinton Township	42309	32	15.1
48042	Macomb	24170	10	8.3
48043	Mount Clemens	17289	22	25.4
48044	Macomb	47457	16	6.7
48045	Harrison Township	26131	16	12.2
48047	New Baltimore	38522	14	7.3
48048	New Haven	7908	5	12.6
48051	New Baltimore	16573	12	14.5
48062	Richmond	9375	5	10.7
48065	Romeo	10807	5	9.3
48066	Roseville	49123	64	26.1
48080	Saint Clair Shores	23543	22	18.7
48081	Saint Clair Shores	22220	13	11.7
48082	Saint Clair Shores	17495	8	9.1
48088	Warren	22583	14	12.4
48089	Warren	34760	46	26.5
48091	Warren	32238	32	19.9
48092	Warren	25802	14	10.9
48093	Warren	22929	13	11.3
48094	Washington	16801	6	7.1
48310	Sterling Heights	43051	22	10.2
48312	Sterling Heights	33721	16	9.5
48313	Sterling Heights	35421	24	13.6
48314	Sterling Heights	21485	15	14.0
48315	Utica	26013	11	8.5
48316	Utica	24820	9	7.3
48317	Utica	28234	17	12.0
Table includes communities with five or more hospitalizations occurring during the period of 2004-2008				

DEATHS AND HOSPITALIZATION CODES

ICD-10 Codes for poisoning by narcotics and psychodysleptics [hallucinogens]	
T40.0	Opium
T40.1	Heroin
T40.2	Other opioids Codeine , Morphine
T40.3	Methadone
T40.4	Other synthetic narcotics - Pethidine
T40.5	Cocaine
T40.6	Other and unspecified narcotics
T40.7	Cannabis (derivatives)
T40.8	Lysergide [LSD]
T40.9	Other and unspecified psychodysleptics [hallucinogens] Mescaline, Psilocin, Psilocybine
Codes used in the analysis of narcotic poisoning deaths. Deaths include overdose of these substances, wrong substance given, or taken in error.	

IC9-CM Code for poisoning by narcotics and psychodysleptics [hallucinogens]	
	Heroin
965.02	Methadone
965.09	Codeine, Morphine, Hydrocodone, Oxycodone
965.8	Propoxyphene
Codes used in the analysis of narcotic poisoning hospitalizations.	

GLOSSARY

BINGE DRINKING: Drinking five or more drinks on the same occasion on at least 1 day in the 30 days prior to the survey.

BLACK: A person having origins of the black racial groups of Africa.

CONVENIENT (NON-PROBABILITY) SAMPLE: Study samples that are often made up of people who meet the study criteria and are easily accessible to the investigator.

DEATH RATE: A death rate is calculated by dividing the number of deaths in a population in a year by the midyear resident population. Death rates in this report are expressed as the number of deaths per 100,000 resident population.

DRUG LAWS: Violations of State and local laws, specifically those relating to the unlawful possession, sales, use, growing and manufacturing of illegal drugs. (The following drug categories are specified: opium or cocaine and their derivatives (morphine, heroin, codeine); marijuana; synthetic narcotics — manufactured narcotics that can cause true addiction (demerol, methadone); and dangerous non-narcotic drugs (amphetamines, barbiturates, benzedrine).

DRUG RELATED DEATHS: any deaths related to recent drug use and is the basis for the death reported as underlying.

D.U.I.: Driving or operating any vehicle or common carrier while under the influence of liquor or drugs.

ILLICIT DRUGS OTHER THAN MARIJUANA: Includes cocaine, heroin, hallucinogens, inhalants, and the non-medical use of prescription-type pain relievers, tranquilizers, stimulants, and sedatives.

ICD-9-CM CODES: International Classification of Diseases, Ninth Edition, Clinical Modification. A listing of diagnoses and identifying codes used to report diagnoses on claims. The Centers for Disease Control and Prevention (CDC) maintains several code sets included in HIPAA standards, including ICD-9-CM codes.

ICD-10 CODES: International Classification of Diseases, Tenth Edition. A classification of diseases that permit the systematic recording, analysis, interpretation and comparison of mortality and morbidity data collected in different countries or areas and at different times. The ICD is used to

translate diagnoses of diseases and other health problems from words into an alphanumeric code, which permits easy storage, retrieval and analysis of the data

HEROIN: An opioid drug that is synthesized from morphine, a naturally occurring substance extracted from the seed pod of the Asian opium poppy plant. Heroin usually appears as a white or brown powder or as a black sticky substance, known as "black tar heroin."

MICHIGAN SUBSTANCE ABUSE COORDINATING AGENCY: A regional entity or agency under agreement with the Michigan Department of Community Health, Mental Health and Substance Abuse Administration, to provide substance abuse prevention and treatment services throughout the State of Michigan.

MORBIDITY: Any departure, subjective or objective, from a State of physiological or psychological well-being.

MORTALITY: A measure of the frequency of occurrence of death in a defined population during a specified interval of time.

OPIOIDS/OPIOIDS: Category of drug which include opioids (narcotic substances derived from opium) and opioids (semisynthetic and synthetic substances with similar narcotic properties). This category is subdivided into 1) heroin (specified) 2) methadone and 3) all other opioids/opioids such as codeine morphine, fentanyl, hydrocodone, oxycodone, and others.

POPULATION: The U.S. Bureau of the Census collects and publishes data on populations in the United States according to several different definitions. Various statistical systems then use the appropriate population for calculating rates. Total population is the population of the United States, including all members of the Armed Forces living in foreign countries, Puerto Rico, Guam, and the U.S. Virgin Islands. Other Americans abroad (for example, civilian Federal employees and dependents of members of the Armed Forces or other Federal employees) are not included. Resident population includes persons whose usual place of residence (that is, the place where one usually lives and sleeps) is in one of the 50 States or the Department of Columbia. It includes members of the Armed Forces stationed in the United States and their families. It excludes international military, naval, and diplomatic personnel and their families located here and residing in embassies or similar quarters. Also excluded are international workers and international students in this country and Americans living abroad. The resident population is usually the denominator when calculating death rates and incidence of disease.

PREVALENCE: is the number of cases of a disease, condition, or patterns with some other attribute present during a particular interval of time. Prevalence is usually used to measure current State of disease patterns among living population within a specified period of time.

RATE: A rate is a measure of some event, disease, or condition in relation to a unit of population, along with some specification of time.

UNDERLYING CAUSE OF DEATH: The underlying cause of death is (a) the disease or injury which initiated the train of events leading directly to death, or (b) the circumstances of the accident, violence, or substance use which produced the fatal injury.

SELF-SELECTION BIAS: Refers to when a group of people being studied has any form of control over whether to participate. Participants' decision to participate may be correlated with traits that affect the study, making the participants a non-representative sample.

STIMULANTS: category of drug which includes amphetamines and methamphetamines.

SYSTEMATIC BIAS: Refers to a constant difference between the results from the sample and the theoretical results from the entire population.