EPI Monthly Report

Florida Department of Health in Miami-Dade County

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Fatal Motor Vehicle Crashes, Miami-Dade County 2008 - 2012

Anthoni Llau, MPH, PhDc

Inside the Issue

Epidemiology, Disease Control & Immunization Services

8600 NW 17th Street

Suite 200

Miami, Florida 33126

Tel: (305) 470-5660

Fax: (305) 470-5533

Introduction

Motor vehicle crashes (MVC's) are among the leading causes of fatal injury in the United States. Nearly 34,000 persons were killed in a motor vehicle crash in the U.S. during 2012, the first increase in fatalities since 2005. In addition to being a leading cause of death, motor vehicle occupant injuries account for approximately 15% of all nonfatal injuries treated in U.S. emergency departments (1). According to the Centers for Disease Control and Prevention (CDC), the one-year costs of fatal and non-fatal crash-related injuries totaled $70 billion during 2005 for people riding in motor vehicles, such as cars and light trucks and $12 billion for motorcyclists (2). A limitation of national fatal crash reports, however, is that trends and contributing factors are not typically provided at a local level.

Thus, the purpose of this analysis was to review the trends in fatal MVC's within Miami-Dade County from the period 2008 - 2012 using data from the Fatality Analysis Reporting System (FARS). FARS is a nationwide census from the National Highway and Traffic Safety Administration (NHTSA), which provides public yearly data regarding fatal injuries suffered in motor vehicle traffic crashes. The advantage of using FARS is that detailed individual crash records are provided at a local level.

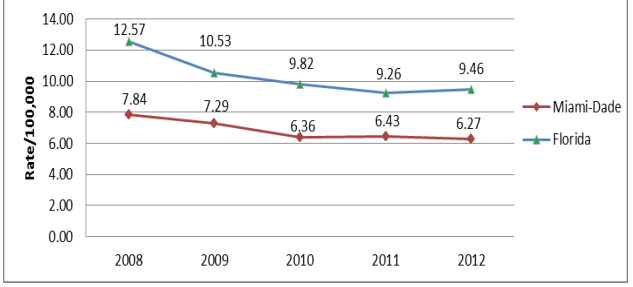
Methods

Analyses were based on 5 years of FARS data from 2008 to 2012. FARS defines a fatal crash as one in which at least one vehicle occupant or non-occupant (e.g., bicyclist, pedestrian) involved in the crash died within 30 days of the crash. This analysis was restricted to occupants (drivers and passengers) of automobiles, sport utility vehicles, pickup trucks, vans, and motorcycles who were killed in a traffic crash within Miami-Dade County. Variables analyzed included individual demographics (age, gender, race/ethnicity), vehicle type, type of occupant, type of collision, speeding, alcohol/drug impairment, and seat belt use. SAS 9.2 was used to conduct all analyses.

Results

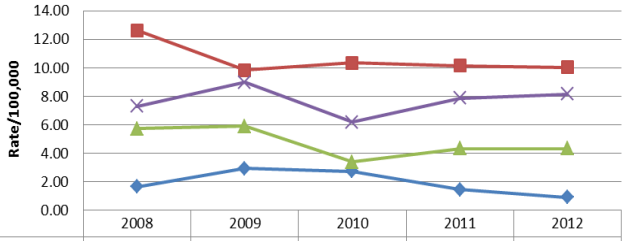
From 2008 - 2012, there were 814 fatal MVC's within Miami-Dade County, resulting in 855 deaths. Between 2008 and 2010 the number of casualties declined 18% and has remained steady since. Mortality rate trends were similar whereby the fatal crash rate declined 19% between 2008 and 2010 and has remained relatively stable through 2012. Additionally, the MVC mortality rate in Miami-Dade has been lower than the state rate each year between 2008 & 2012 (Figure 1).

Figure 1: Motor Vehicle Occupant Fatality Rates
Miami-Dade County & Florida: 2008 - 2012



The highest fatal MVC occupant rates were among younger adults (18 – 44 years) and the elderly (65+ years) (Figure 2), however, between 2008 and 2012, a decline in fatality rates was observed among the 18 – 44 age group (21%). In contrast, fatality rates increased 11% among the elderly during the same time period. Fatal injury MVC rates among 0 – 17 year olds increased 78% between 2008 & 2009. Since then, the rate declined 69% through 2012. Rates among this age group, however, may be unstable due to the small number of annual deaths (approximately 11 per year). In regards to gender and race/ethnicity, the fatal MVC injury rate for males was nearly three times that of females. Crash fatality rates for White Non-Hispanics (7.54 deaths/100,000 population) were slightly higher than African Americans (6.55) and Hispanics (6.81).

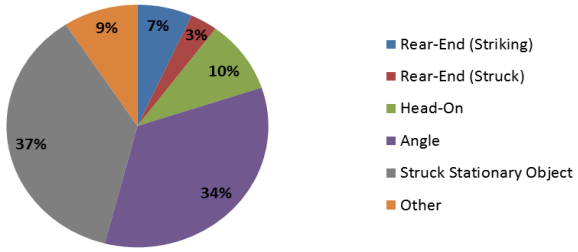
Figure 2: MVC Occupant Fatality Rates, By Age Group, Miami-Dade County: 2008 - 2012



	2008	2009	2010	2011	2012
0 - 17 Years	1.65	2.94	2.75	1.47	0.92
18 - 44 Years	12.62	9.83	10.34	10.14	10.03
45 - 64 Years	5.74	5.90	3.41	4.34	4.34
65+ Years	7.31	8.99	6.18	7.87	8.15

Among the 855 fatal MVC victims, 74% were drivers, 25% were passengers and 1% other. Just over half (52%) of victims were occupants of passenger cars while 26% were in a motorcycle. One-fifth of victims were inside standard utility vehicles (SUV's), pickup trucks, or vans. Concerning the type of crash, 37% of victims were inside a vehicle that struck a stationary (i.e. tree, pole) object. Approximately a third of victims were involved in right angle collisions. Victims involved in rear-end and head-on collisions each accounted for 10% of crash types (Figure 3). Among rear-end collisions, nearly 70% of victims were inside the striking vehicle. Speeding was a factor in 17% of fatal MVC's.

Figure 3: Crash Type for Fatal MVC Victims Miami-Dade County: 2008 - 2012



According to police reports and toxicology tests, 204/855 persons (24%) killed in traffic crashes during 2008 – 2012 were under the influence of alcohol and/or drugs at the time of the incident, of which all but two were driving. The majority of drivers under the influence were impaired due to alcohol alone (89%). The remaining impaired drivers were reported to be under the influence of both alcohol and drugs (11%).

Decreases of unrestrained fatal MVC victims were observed. Between 2008 and 2012, the proportion of drivers (non-motorcyclists) unrestrained at the time of the crash declined 14%. During the same time period, proportions of unrestrained passengers killed in motor vehicle crashes declined by nearly half. Despite these decreases, nearly half of drivers killed in motor vehicle crashes during 2012 were not wearing a seat belt.

Discussion

MVC fatality rates have declined since 2008. Part of this decrease could be attributed to legislation enacted in 2009 requiring all drivers and front seat passengers to use seat belts when a vehicle is in motion. Since then decreases of unrestrained fatal

MVC victims have been observed. Evidence indicates wearing seat belts and properly securing children in car seats can reduce serious injuries and deaths in crashes by approximately half (3). Alcohol and drug use also appears to contribute to a considerable portion of fatal crashes. Alcohol-impaired drivers are involved in about 1 in 3 crash deaths in the U.S., resulting in nearly 11,000 deaths in 2009 (4). Prevention measures to avoid impaired driving crashes include designating a nondrinking driver when with a group, calling a taxi if out drinking, and not allowing friends to drink and drive.

References

CDC. WISQARS (Web-based Injury Statistics Query and Reporting System). Atlanta, GA: US Department of Health and Human Services, CDC; 2010. Available at: http://www.cdc.gov/injury/wisqars.

Naumann RB, Dellinger AM, Zaloshnja E, Lawrence BA, Miller TR. (2010). Incidence and total lifetime costs of motor vehicle-related fatal and non-fatal injury by road user type, United States, 2005. *Traffic Injury Prevention*. 11(4):353-360.

CDC. (2011). Adult seat belt use. Available at: http://www.cdc.gov/vitalsigns/SeatBeltUse/index.html

CDC. (2011). Drinking and Driving. A threat to everyone. Available at: http://www.cdc.gov/vitalsigns/drinkinganddriving/

February is American Heart Month!

Heart disease is the leading cause of death for both men and women in the United States. Every year 1 in 4 deaths is caused by heart disease. You can make healthy changes to lower your risk of developing heart disease. Controlling and preventing risk factors is also important for people who already have heart disease.

To lower your risk:

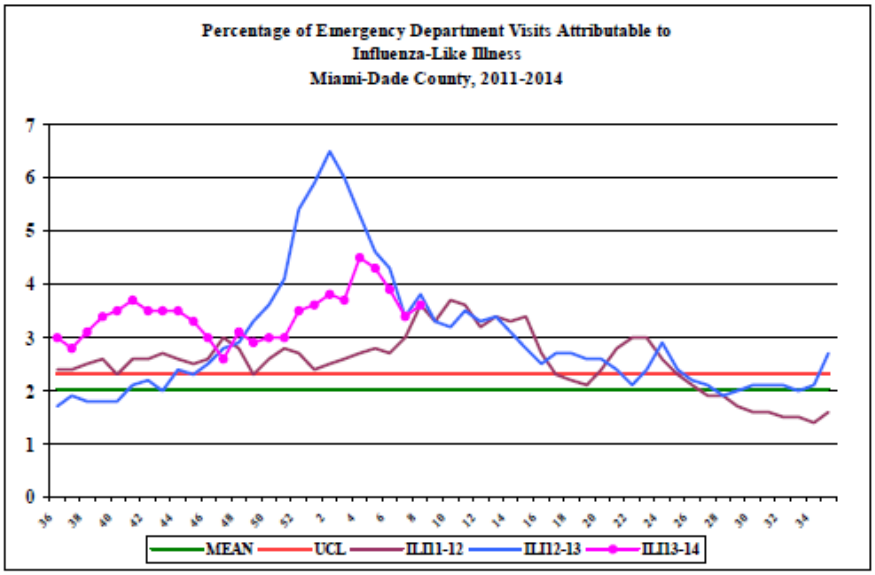
- Watch your weight.
- Quit smoking and stay away from secondhand smoke.
- Control your cholesterol and blood pressure.
- If you drink alcohol, drink only in moderation.
- Get active and eat healthy.

Make a Difference: raise awareness about heart disease and how people can prevent it - both at home and in the community. Here are just a few ideas:

- Encourage families to make small changes, like using spices to season their food instead of salt.
- Motivate teachers and administrators to make physical activity a part of the school day. This can help students start good habits early.
- Ask doctors and nurses to be leaders in their communities by speaking out about ways to prevent heart disease.

American Heart Month is sponsored by the American Heart Association. Visit http://www.heart.org/HEARTORG/ for more heart health information.

Influenza-Like-Illness, All Age



During this period, there were 24,160 ED visits; among them 874 (3.6%) were ILI. At the same week of last year, 3.8% of ED visits were ILI.

PARTICIPATE IN INFLUENZA SENTINEL PROVIDER SURVEILLANCE

Florida Department of Health in Miami-Dade County NEEDS Influenza Sentinel Providers!

Sentinel providers are key to the success of the Florida Department of Health's Influenza Surveillance System. Data reported by sentinel providers gives a picture of the influenza virus and ILI activity in the U.S. and Florida which can be used to guide prevention and control activities, vaccine strain selection, and patient care.

- Providers of any specialty, in any type of practice, are eligible to be sentinel providers.
- Most providers report that it takes **less than 30 minutes a week** to compile and report data on the total number of patients seen and the number of patients seen with influenza-like illness.
- Sentinel providers can submit specimens from a subset of patients to the state laboratory for virus isolation **free of charge**.

For more information, please contact

Lakisha Thomas at 305-470-5660.

TO REPORT ANY DISEASE AND FOR INFORMATION CALL:
Epidemiology, Disease Control & Immunization Services

Childhood Lead Poisoning Prevention Program 305-470-6877
Hepatitis 305-470-5536
Immunizations or outbreaks 305-470-5660
HIV/AIDS Program 305-470-6999

STD Program 305-575-5430
Tuberculosis Program 305- 575-5415

Immunization Service 305-470-5660

About the Epi Monthly Report

The Epi Monthly Report is a publication of the Florida Department of Health in Miami-Dade County: Epidemiology, Disease Control & Immunization Services. The publication serves a primary audience of physicians, nurses, and public health professionals. Articles published in the Epi Monthly Report may focus on quantitative research and analysis, program updates, field investigations, or provider education. For more information or to submit an article, contact Kathleen Ochipa at (305) 470-6918.

Miami-Dade County Monthly Report
Select Reportable Disease/Conditions
January 2014

Diseases/Conditions	2014 Current Month	2014 Year to Date	2013 Year to Date	2012 Year to Date
HIV/AIDS				
AIDS*	38	38	58	64
HIV	110	110	123	108
STD				
Infectious Syphilis*	29	29	19	36
Chlamydia*	669	669	804	778
Gonorrhea*	153	153	188	220
TB				
Tuberculosis**	7	7	5	3
Epidemiology, Disease Control & Immunization Services				
Epidemiology				
Campylobacteriosis	20	20	13	36
Ciguatera Poisoning	0	0	0	0
Cryptosporidiosis	3	3	2	2
Cyclosporiasis	0	0	0	0
Dengue Fever	0	0	1	0
E. coli, O157:H7	0	0	0	0
E. coli, Non-O157	0	0	0	0
Encephalitis, West Nile Virus	0	0	0	0
Giardiasis, Acute	12	12	12	8
Influenza Novel Strain	0	0	0	0
Influenza, Pediatric Death	0	0	0	0
Legionellosis	1	1	4	1
Leptospirosis	0	0	0	0
Listeriosis	0	0	0	0
Lyme disease	0	0	0	0
Malaria	0	0	3	1
Meningitis (except aseptic)	2	2	2	0
Meningococcal Disease	0	0	2	1
Salmonellosis	33	33	34	22
Shigellosis	20	20	1	3
Streptococcus pneumoniae, Drug Resistant	3	3	8	7
Toxoplasmosis	0	0	0	1
Typhoid Fever	0	0	0	0
Vibriosis	1	1	0	0
West Nile Fever	0	0	0	0
Immunization Preventable Diseases				
Measles	0	0	0	0
Mumps	0	0	0	0
Pertussis	1	1	0	1
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	3	3	3	4
Hepatitis				
Hepatitis A	1	1	1	0
Hepatitis B (Acute)	2	2	1	0
Lead				
Lead Poisoning	8	8	1	4

*Data is provisional at the county level and is subject to edit checks by state and federal agencies.

** Data on tuberculosis are provisional at the county level.