

**Rochester Firearm-Related Violence: 2004-2014**

**Working Paper #GIVE-2014-01**



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**Center for Public Safety Initiatives at RIT**

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Rochester, NY is one of seventeen sites selected for the Gun Involved Violence Elimination (GIVE) Initiative, which is funded by the New York State Division of Criminal Justice Services. GIVE sites will incorporate up to six evidence-based practices (street outreach, problem oriented policing, hot spots policing, crime prevention through environmental design, procedural justice, and focused deterrence) to develop a multi-component strategy targeting gun violence.

The Center for Public Safety Initiatives will develop a series of working papers focusing on gun violence and the many ways it impacts the City of Rochester and Monroe County. This is the first paper in the series, and it focuses on general trends of firearm-related violence within the city.

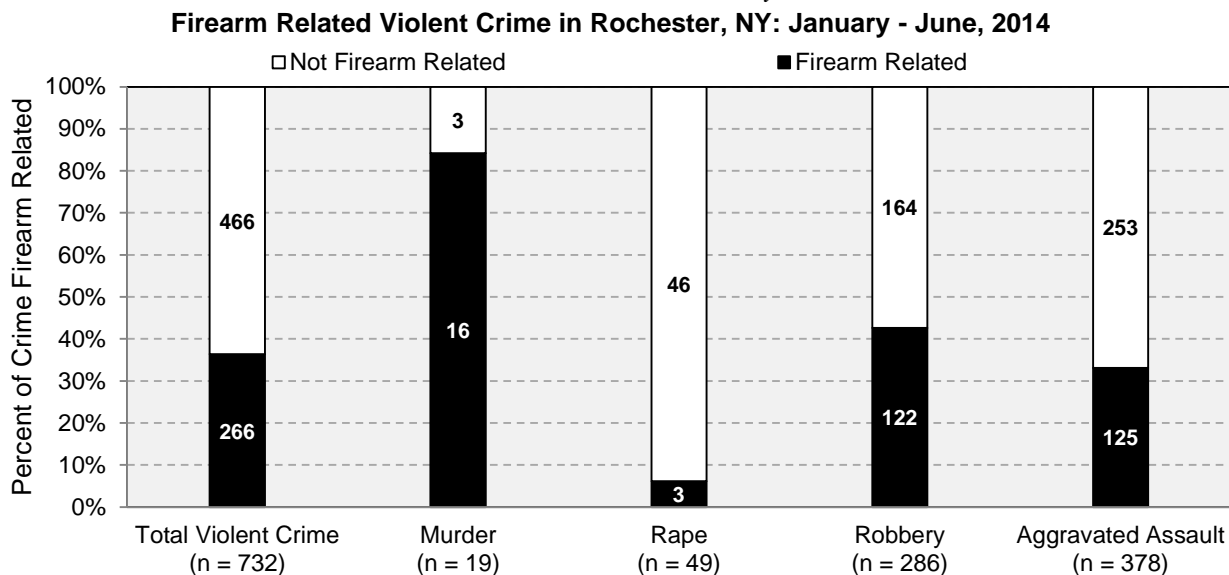
**Data**

As part of the GIVE initiative the New York State Division of Criminal Justice Services (DCJS) receives Uniform Crime Reports or New York State Incident Based Reporting Program crime and arrest data from the Rochester City Police and nineteen other jurisdictions. DCJS compiles this data into their Monthly Crime, Arrest, and Firearm Activity Report (Division of Criminal Justice Services, 2014). This paper is derived from data contained within that report.

**Violent Crime within Rochester, NY: January – June 2014**

The chart below displays the total percentage of firearm related crime for all reported crime types (i.e., murder, rape, robbery, aggravated assault, and total violent crime) within the City of Rochester for the first six months of 2014. The total count of reported crime is listed below each criminal act. Each bar displays the total count of crime that was firearm related or not firearm related.

*Chart 1: Firearm Related Violent Crime in Rochester, NY: January – June, 2014*



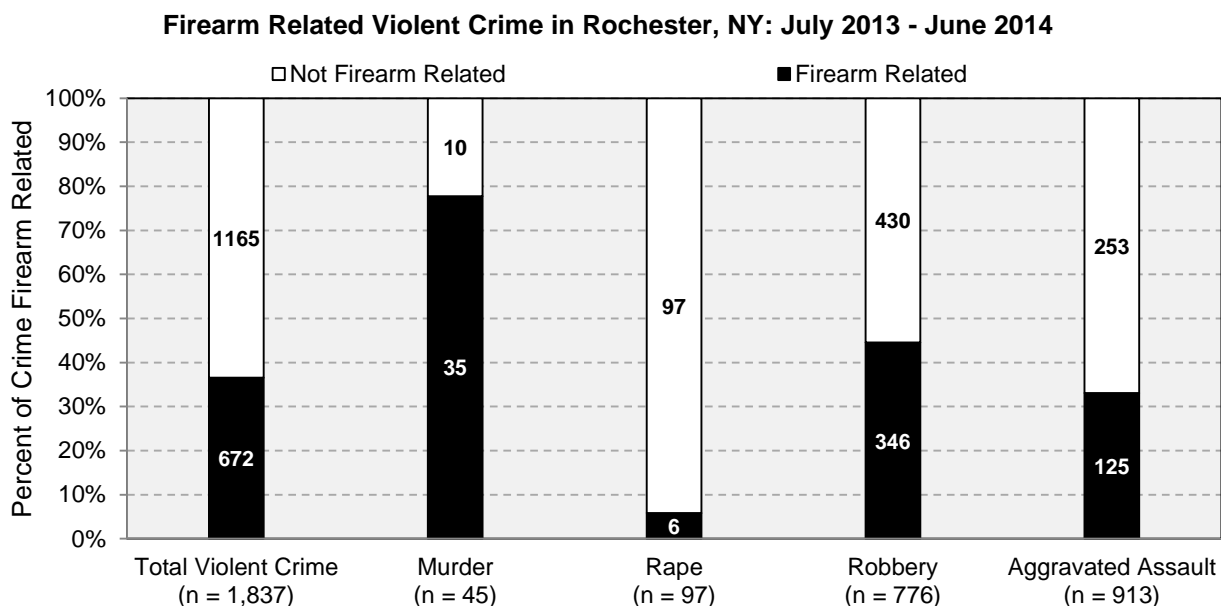
**Data from:** Crime, Arrest and Firearm Activity Report. New York State Division of Criminal Justice Services.

Over one-third of all reported violent crimes to occur within the City of Rochester in the first six months of 2014 were firearm related (36.64%). A high level of variability exists on the percentage of firearm related crimes for different crime types. Most murders (84.21%) were firearm related, while only a small percentage of reported rapes (6.12%) involved firearms. Robbery (42.66%) and Aggravated Assault (33.07%) were both frequently firearm-related.

### Violent Crime within Rochester, NY: June 2013-May 2014

Chart 2 provides the same information described above for the one-year period of July 2013 – June 2014. Again, over one-third of all violent crime (36.58%) was firearm related and there was great variability in the percentage of firearm related crimes for murder (77.78%), rape (5.83%), robbery (44.59%), and aggravated assault (33.07%).

Chart 2: Firearm Related Violent Crime in Rochester, NY: July, 2013 – June, 2014



The data above provide an overview of the amount of firearm related crime among the violent crimes of murder, rape, robbery, aggravated assault, and total violent crime. To provide larger context we now examine crime trends over ten years.

## Total Violent Crime

Table 1 displays the reported count of violent crime within Rochester between 2004 and 2013 and the number of these crimes related to firearms. Each year, between 28.98% (2011) and 48.37% (2004) of all reported violent crimes within Rochester between 2004 and 2013 were firearm related. As of June 30, 2014, there were 732 violent crime incidents reported within Rochester for the year.

*Table 1: Violent Crime in Rochester, 2004-2013*

<b>Violent Crime</b>		
	Total Count	% Firearm Related
<b>2004</b>	1,782	48.37%
<b>2005</b>	2,189	43.08%
<b>2006</b>	2,666	46.47%
<b>2007</b>	2,350	36.64%
<b>2008</b>	2,302	32.97%
<b>2009</b>	2,029	33.61%
<b>2010</b>	2,231	31.69%
<b>2011</b>	2,036	28.98%
<b>2012</b>	2,067	33.58%
<b>2013</b>	2,107	35.83%
<b>5-Year Average (2009-2013)</b>	2,094	32.74%

## Murder

Table 2 displays the count of reported murders within Rochester between 2004 and 2013 and how many of these were firearm related. Between 45.16% (2011) and 82.14% (2009) of all reported murders within Rochester between 2004 and 2013 were firearm related. As of June 30, 2014, there were 19 murders reported within Rochester for the year.

*Table 2: Murder in Rochester, 2004-2013*

<b>Murder</b>		
	Total Count	% Firearm Related
<b>2004</b>	36	72.22%
<b>2005</b>	53	73.58%
<b>2006</b>	49	69.39%
<b>2007</b>	50	78.00%
<b>2008</b>	43	74.42%
<b>2009</b>	28	82.14%
<b>2010</b>	41	70.73%
<b>2011</b>	31	45.16%
<b>2012</b>	36	77.78%
<b>2013</b>	42	69.05%
<b>5-Year Average (2009-2013)</b>	35.6	68.97%

## Rape

Table 3 displays the count of reported rape within Rochester between 2004 and 2013 and the percentage of firearm related rape. Between 3.26% (2009) and 7.69% (2004) of all reported rapes within Rochester between 2004 and 2013 were firearm related. As of June 30, 2014, there were 49 cases of rape reported within Rochester for the year.

*Table 3: Rape in Rochester, 2004-2013*

<b>Rape</b>		
	Total Count	% Firearm Related
<b>2004</b>	91	7.69%
<b>2005</b>	100	6.00%
<b>2006</b>	92	5.43%
<b>2007</b>	121	3.31%
<b>2008</b>	98	4.08%
<b>2009</b>	92	3.26%
<b>2010</b>	97	4.12%
<b>2011</b>	97	6.19%
<b>2012</b>	111	6.31%
<b>2013</b>	92	4.35%
<b>5-Year Average (2009-2013)</b>	97.8	4.84%

## Robbery

Table 4 displays the count of reported robbery within Rochester between 2004 and 2013 and how many robberies were firearm related. Between 42.02% (2008) and 55.41% (2006) of all reported robberies within Rochester between 2004 and 2013 were firearm related. As of June 30, 2014, there were 286 robberies reported within Rochester for the year.

*Table 4: Robbery in Rochester, 2004-2013*

<b>Robbery</b>		
	Total Count	% Firearm Related
<b>2004</b>	932	51.29%
<b>2005</b>	1,026	54.87%
<b>2006</b>	1,332	55.41%
<b>2007</b>	1,032	44.96%
<b>2008</b>	1,059	42.02%
<b>2009</b>	838	45.23%
<b>2010</b>	817	45.78%
<b>2011</b>	759	42.82%
<b>2012</b>	816	42.28%
<b>2013</b>	918	44.23%
<b>5-Year Average (2009-2013)</b>	829.6	44.07%

## Aggravated Assault

Table 5 displays the count of reported aggravated assaults within Rochester between 2004 and 2013 and how many of these aggravated assaults were firearm related. Between 21.32% (2011) and 48.55% (2004) of all reported aggravated assaults within Rochester between 2004 and 2013 were firearm related. As of June 30, 2014 there were 378 aggravated assaults reported within Rochester for the year.

*Table 5: Aggravated Assault in Rochester, 2004-2013*

<b>Aggravated Assault</b>		
	Total Count	% Firearm Related
<b>2004</b>	723	48.55%
<b>2005</b>	1,010	33.17%
<b>2006</b>	1,193	38.73%
<b>2007</b>	1,147	30.86%
<b>2008</b>	1,102	25.23%
<b>2009</b>	1,071	25.86%
<b>2010</b>	1,276	23.51%
<b>2011</b>	1,149	21.32%
<b>2012</b>	1,104	28.44%
<b>2013</b>	1,055	29.95%
<b>5-Year Average (2009-2013)</b>	1,131	25.82%

## Measures of Central Tendency and Dispersion

We conclude measures of central tendency and dispersion across ten years. A larger standard deviation means greater variability surrounding the average. For example, Rape has a low standard deviation: most years fall within 1.47% of the mean (i.e., 3.57%-6.54% firearm-related). Murder has a larger standard deviation: most years falling within 10.07% of the mean (i.e., 61.18% - 81.32% firearm-related).

*Table 6: Aggravated Assault in Rochester, 2004-2013*

<b>Measures of Central Tendency and Dispersion 10-year average (2004-2013)</b>		
	Average % Firearm-Related Crime (2004-2013)	Standard Deviation
<b>Violent Crime</b>	37.12%	6.58%
<b>Murder</b>	71.25%	10.07%
<b>Rape</b>	5.07%	1.47%
<b>Robbery</b>	46.89%	5.08%
<b>Aggravated Assault</b>	30.56%	8.08%

## **Conclusion**

This working paper was created to illustrate the level of firearm-related crime within the City of Rochester, using data provided by the New York State DCJS. The data indicate that some violent crimes, such as Murder, frequently involve the use of firearms; other crimes, such as rape, do not usually involve firearms. Looking at the standard deviation of these crimes, there were greater levels of distribution around the average for some firearm-related crimes (Murder, Aggravated Assault) compared to others (Rape).

Moving on, future working papers in this series will examine specific gun-violence topics (e.g. gun seizure, shooting victim, and offender data), while other working papers will be created to examine specific Rochester GIVE strategies (e.g. a follow-up of Procedural Justice and Focused Deterrence call-ins, and analysis of Problem Oriented Policing Strategies).