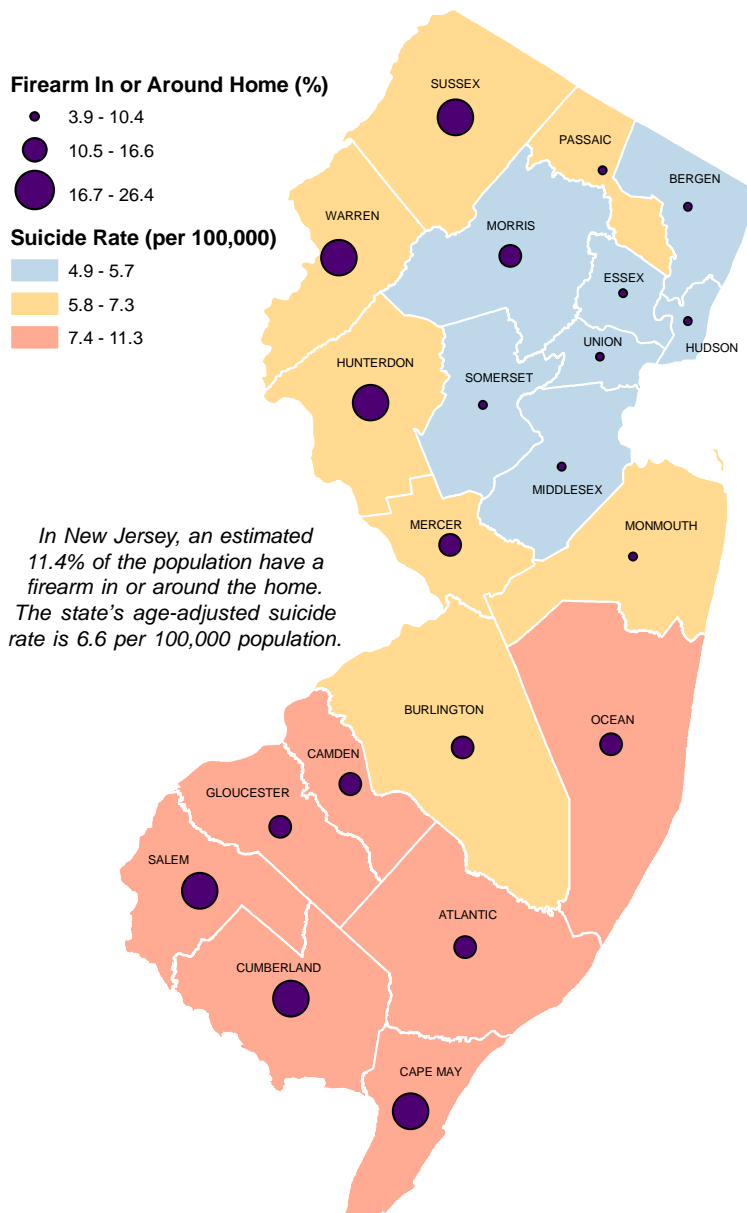


Suicide and firearm ownership, New Jersey, 2003-2005



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Percentage with a firearm¹ in or around home and age-adjusted suicide rate², by county, New Jersey 2003-2005



The relationship between firearm prevalence and suicide has been well established in a number of national studies (Miller et al, 2007). In fact, the national decline in suicide rates over the past several decades has been associated with a simultaneous decline in firearm ownership (Miller et al, 2006). Restricting access to lethal means is an important component of suicide prevention efforts worldwide.

New Jersey has relatively low rates of both suicide and gun ownership, but as can be seen, they are correlated at the county level ($r = .43$). Counties with higher rates of gun ownership tend to be located in the South or Northwestern part of the state. In general, these counties have above average suicide rates, and the percent of suicides committed with a firearm in these counties is also above average. Male suicide rates are more sensitive to firearm prevalence because males are more likely than females to use firearms as a mechanism.

There is a clear spatial pattern to suicide in New Jersey, with more urbanized counties having lower rates, while more rural counties have higher rates. This is consistent with national patterns, where suicide rates are generally highest in states with the lowest population density such as Wyoming and Alaska.



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Suicide rates and firearm ownership, New Jersey, 2003-2005

	Suicide		Firearm	Firearm Suicide	
	N	Rate	Ownership %	N	% Suicides
Atlantic	72	8.8	12.3	20	27.8
Bergen	160	5.6	10.4	34	21.3
Burlington	97	7.1	16.0	34	35.1
Camden	175	11.3	13.2	56	32.0
Cape May	31	10.1	18.3	9	29.0
Cumberland	44	9.6	19.9	14	31.8
Essex	122	5.2	8.3	25	20.5
Gloucester	65	7.8	16.6	24	36.9
Hudson	90	4.9	3.9	21	23.3
Hunterdon	28	7.1	23.4	8	28.6
Mercer	68	6.1	10.5	22	32.4
Middlesex	136	5.6	9.3	26	19.1
Monmouth	138	7.2	8.9	37	26.8
Morris	80	5.5	10.5	24	30.0
Ocean	144	8.4	12.5	46	31.9
Passaic	90	6.1	9.0	32	35.6
Salem	16	8.1	26.4	7	43.8
Somerset	54	5.8	10.4	11	20.4
Sussex	33	7.3	22.2	15	45.5
Union	86	5.2	8.0	26	30.2
Warren	21	6.3	24.6	10	47.6
Unknown	7	-	-	1	14.3
New Jersey Total	1,757	6.6	11.4	503	28.6

Data sources: New Jersey Violent Death Reporting System, v.07/17/2007; New Jersey Behavioral Risk Factor Survey, 2004; NCHS for bridged-race population estimates.

While the rural-urban difference in firearm prevalence is a major part of the reason for this spatial pattern in suicide rates, other factors may be at work as well. For example, it may be the case that low density places are more likely to attract and retain residents with relatively poor psychological well being. Another possibility is that at-risk individuals in low population density areas may be less likely to receive adequate treatment for mental illness, alcohol abuse, and other factors increasing the risk of suicide.

The link between gun ownership and suicide in New Jersey provides an opportunity for prevention efforts based on the premise that those with a gun in their household are at elevated risk for suicide. Hunting and shooting clubs, and other gun-related organizations can provide members with suicide prevention information. The use of trigger locks and lock boxes by gun owners should be encouraged. Law enforcement agencies in counties and municipalities with high gun ownership rates can provide information on gun safety and suicide prevention. Health professionals in these areas can inform patients and their families about risks associated with keeping a firearm in the home.

¹Firearms include pistols, shotguns, and rifles. Excluded are BB guns, starter pistols, and guns that cannot fire. Also included are weapons kept in a garage, outdoor storage area, or motor vehicle.

²All ages are included in rates.

The New Jersey Violent Death Reporting System (NJVDERS) is a CDC-funded surveillance system, a collaborative effort of the Center for Health Statistics of the New Jersey Department of Health and Senior Services and the Violence Institute of New Jersey at the University of Medicine and Dentistry of New Jersey. The project seeks to help researchers determine the circumstances and risk factors associated with suicide and other violent deaths by linking timely data from multiple detailed sources. Firearm ownership data is from the New Jersey Behavioral Risk Factor Survey, age-adjusted prevalence estimates, 2004.

M Miller, SJ Lippmann, D Azrael, and D Hemenway. Household firearm ownership and rates of suicide across the 50 United States. *Journal of Trauma-Injury Infection & Critical Care*. April 2007; **62**(4):1029-1035.

M Miller, D Azrael, L Hepburn, D Hemenway and SJ Lippmann. The association between changes in household firearm ownership and rates of suicide in the United States, 1981–2002. *Injury Prevention*. 2006; **12**:178-182; doi:10.1136/ip.2005.010850



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