Epidemiology of Firearm Violence in the 21st Century

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Mass Shootings, 1999-2013

Krouse & Richardson, Congressional Research Service, 2015
Mass Public Shootings, 1999-2013

Krouse & Richardson, Congressional Research Service, 2015
Mortality from Firearm Homicide and Mass Public Shootings, 1970-2013

Krouse & Richardson, Congressional Research Service, 2015
Mortality from Firearm Homicide and Mass Public Shootings, 1970-2013

Mass shooting: 1 per 10 million

Krouse & Richardson, Congressional Research Service, 2015
Mortality from Firearm Homicide and Mass Public Shootings, 1970-2013

- Homicide: >355 per 10 million
- Mass shooting: 1 per 10 million

Krouse & Richardson, Congressional Research Service, 2015
Mortality from Firearm Homicide and Mass Public Shootings, 1970-2013

Suicide: 670 per 10 million

Homicide: >355 per 10 million

Mass shooting: 1 per 10 million

Krouse & Richardson, Congressional Research Service, 2015
All Those People

- 308,120 deaths from firearm suicide or homicide, 2004-2014
- 32,279 deaths, 2014
- 69.2% of homicides, 49.9% of suicides
- $229 B in aggregate costs for firearm death and injury, 2012: ~1.4% of GDP
Death Rates from Motor Vehicle Traffic Events and Firearm Violence, 1950-2014

Deaths/100,000 Population

Year

Motor Vehicles

Firearms

1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
2010
Death Rates from Firearm Suicide and Homicide, 1981-2014
Death Rates from Firearm Homicide Males, 2014
Death Rates from Firearm Suicide
Males, 2014

Deaths/100,000 Population

- White
- Black
- Hispanic

Age

Deaths from Firearm Violence
Males, 2014

Number of Deaths

Age


White
Black
Hispanic
Background Checks for Firearm Transfers

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Alcohol and Firearm Violence

• 30d alcohol use among firearm owners:
  – 8.9-11.7M binge, 2.5-3.6M heavy

• Prevalence of acute intoxication:
  – 34% of firearm homicide perpetrators
  – 25.7% of firearm suicide perpetrators
  – 30.2% of firearm homicide victims

• Relative risk:
  – Interpersonal violence perpetration, 3x-6x (pre-existing)
  – Firearm violence victimization, 3x-6x (acute)
  – Firearm suicide, 3x-10x (pre-existing); 75x-85x (acute)
Should Alcohol Abusers Be Able to Purchase Firearms?

• Federal statute silent
• State prohibitions vague
• 3 states (and DC) have enforceable laws
  – Enforcement poor, or no data
• California proposal enacted by legislature, vetoed by governor
## Prior Crimes and Relative Risk of Future Arrest among Handgun Purchasers

Referent: Purchasers with no prior criminal record

<table>
<thead>
<tr>
<th>Prior Convictions</th>
<th>Relative Risk</th>
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<tbody>
<tr>
<td></td>
<td>Any</td>
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<tr>
<td>Gun-, Vio-</td>
<td>1</td>
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<tr>
<td></td>
<td>2+</td>
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<tr>
<td>Characteristic</td>
<td>Relative Risk</td>
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<td>-------------------------------</td>
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<tr>
<td></td>
<td>Gun/Violent Crime</td>
</tr>
<tr>
<td>All</td>
<td>1.3</td>
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<tr>
<td>Age 21-24</td>
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<tr>
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<tr>
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<td>1.4</td>
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<tr>
<td>3+ G/V Convictions</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Referent: Persons whose purchases were denied
More Information

• VPRP’s website:
  http://www.ucdmc.ucdavis.edu/vprp

Serious Mental Illness

• Small risk for mental illness alone
  – Interpersonal violence: 4%
  – Self-harm: 47%-74%

• Much higher with hx violence, ETOH, drug abuse

• Prohibiting in some cases

• Jan 2016: gun violence restraining order
Yes, You Can

• Yes, you can ask
  – Screening vs case-finding
  – Risk factors first
  – ACA and “gag laws”

• Yes, you can counsel

• Yes, you can disclose
  – HIPAA regs