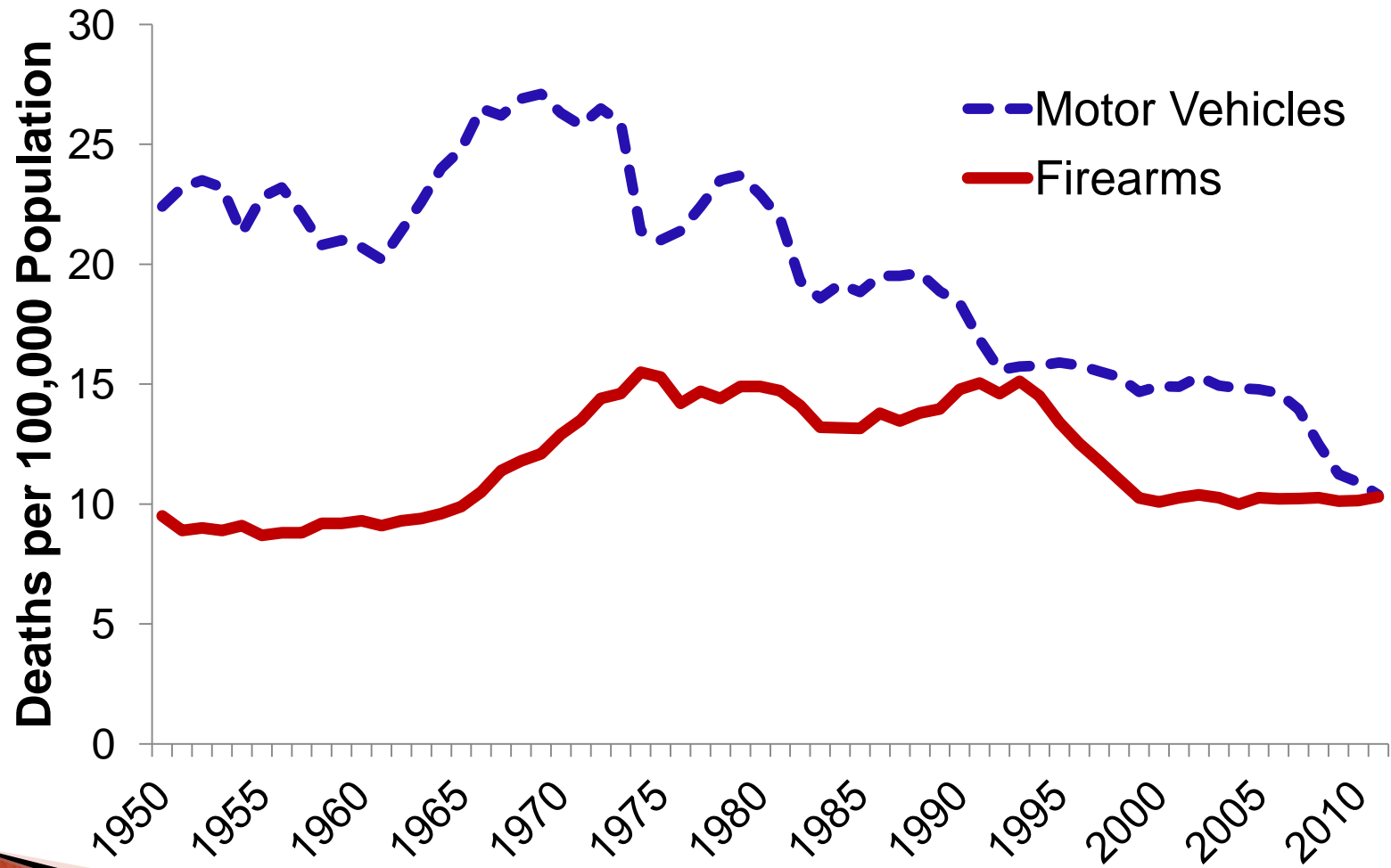


Intervention Research Priorities: Reducing the Threat of Firearm-Related Violence

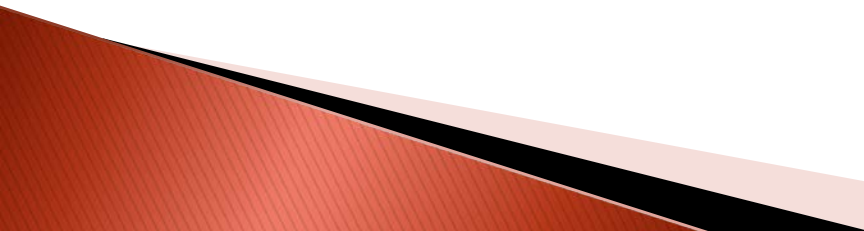
Garen Wintemute, MD, MPH



Motor Vehicle Traffic Fatalities and Firearm Mortality in the US, 1950–2011



General Considerations

- ▶ Is intervention necessary?
 - Is there a problem?
 - Is it amenable to intervention?
 - ▶ Do interventions exist?
 - Where are the “laboratories”?
 - What have they done?
 - ▶ Are interventions effective?
 - Is effectiveness plausible?
 - Can effectiveness be measured?
- 

Firearm Behaviors and Alcohol Use

Characteristic	Odds Ratio		
	>5 Drinks/occ	Drink and drive	>60 drinks/mo
Firearm owner	1.3	1.8	1.5
Owner: Drive/ride with firearm			
Yes	1.7	3.0	2.2
No	1.2	1.6	1.3
Owner: Carry for protection			
Yes	1.5	2.1	1.6
No	1.3	1.7	1.4

Referent: Persons who do not own firearms

Do Criminal History Prohibitions Cover the Population at Risk?

- ▶ Cohort study: 5,923 handgun purchasers
 - 2,795 no criminal record, 3,128 prior conviction(s)
- ▶ 15y follow-up

Prior History	Percentage Arrested			
	Any	Gun, Not Violent	Violent	Violent Crime Index
None	9.8	2.0	4.4	2.5
Conviction	50.4	13.2	24.9	15.4

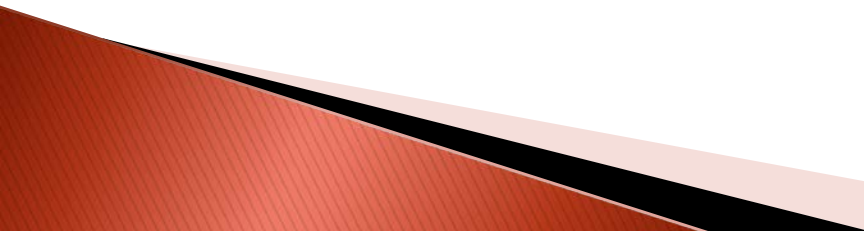
Violent Crime Index: murder, rape, robbery, aggravated assault

Prior Crimes and Relative Risk of Arrest

Prior Convictions		Relative Risk			
		Any	Gun, Not Violent	Violent	Violent Crime Index
Gun-, Vio-	1	5.9	4.8	4.8	5.0
	2+	7.8	6.5	6.8	6.4
Gun+, Vio-	1	6.4	7.7	4.4	5.2
	2+	10.9	14.7	13.0	12.4
Vio+	1	9.3	8.7	8.9	9.4
	2+	11.3	11.7	10.4	15.1

Referent: Handgun purchasers with no prior criminal record.

Are Background Checks and Denial Effective?

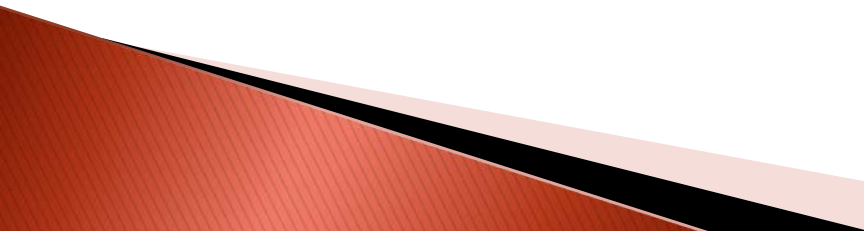
- ▶ Violent misdemeanants seeking to purchase handguns
 - ▶ “Treatment” group: $n=986$, purchase denied under new law
 - ▶ Control group: $n=787$, purchase allowed under prior law
 - ▶ Otherwise very similar (age, criminal history)
 - ▶ Hypothesis: no difference in risk of arrest
- 

Handgun Purchase and Relative Risk of Arrest

Characteristic	Relative Risk	
	Gun/Violent Crime	Other Crime
All	1.3	1.0
Age 21–24	1.4	1.0
1 Conviction	1.3	1.0
4+ Convictions	1.8	0.9
1 G/V Conviction	1.4	1.0
3+ G/V Convictions	0.9	0.8

Referent: Persons with characteristic whose purchases were denied

How Often Do Legal Purchasers Become Prohibited Persons?

- ▶ 7,256 handgun purchasers
 - 4,495 no criminal record, 2,761 criminal history
 - ▶ No violent misdemeanants
 - ▶ 5y follow-up
 - ▶ If a prior conviction: 21% arrested, 4.5% convicted of prohibiting offense
 - ▶ With age and prior convictions, risk of arrest varied by factor of 200
- 

Prior Record and Risk for New Prohibiting Conviction

Prior Convictions	Percentage with Outcome	
	Federal Prohibition	Violent CI Conviction
No record	1.0	0.3
1	3.3	1.3
2	7.0	2.1
3+	7.3	2.0

Point-Source Retailers

- ▶ Disproportionate sales of firearms that are later traced following firearm-related or violent crime
- ▶ Higher proportion of denied sales
- ▶ Short time to crime
- ▶ Say “yes” to proposed straw purchase
- ▶ Mechanisms?
 - Retailer
 - Clientele
 - Community

Priority Research Topics

- ▶ Effects of expanding denial criteria to additional high-risk groups
 - ▶ Effects of recovering firearms from (newly-) prohibited persons
 - ▶ (If developed) Effects of interventions with important point-source retailers
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