Suicidal Behavior and Firearm Access: Results from the Second Injury Control and Risk Survey (ICARIS-2)



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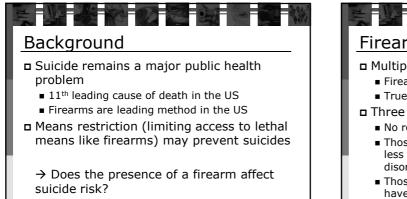
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Presenter Disclosures

The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

The authors have no relationships to disclose



# Firearms in the Home Multiple case-control studies: Firearm in the home = risk factor for suicide<sup>1-16</sup> True, or confounded by something else? Three recent studies with national surveys No relation between mental health & firearms<sup>18</sup> Those with firearms in the home not more or less likely to have lifetime or recent psychiatric

- Inose with firearms in the nome not more or less likely to have lifetime or recent psychiatric disorders or suicidal ideation<sup>19-20</sup>
- Those with firearms in the home less likely to have a history of lifetime or recent attempt<sup>19-20</sup>

# 

### Study Questions

- Are suicidal ideation, plans or attempts more common among those with a firearm in the home?
- Do the *nature* of suicidal plans differ among those with and without a firearm in the home?
- Data from the Second Injury Control and Risk Survey (ICARIS-2)

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## Methods: ICARIS-2

- $\blacksquare$  Conducted by the CDC; 7/23/01- 2/7/03  $^{\scriptscriptstyle 21}$
- Cross-sectional, list-assisted random-digitdial telephone survey
  - Households in all 50 states and D.C. (coverage of ~96% of private residences with a phone; 113,476 numbers sampled)
  - English- and Spanish-speakers aged 18+
- Database includes weighting variables to generate national estimates
  - Account for selection probabilities, nonresponses and post-stratification

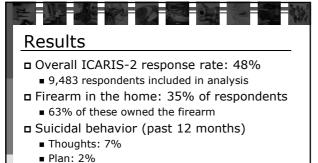
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## Methods: Variables

- Basic demographic characteristics
  - Gender, self-described race, ethnicity, age, urbanicity of residence, employment status, education, marital status, income
- Firearm module (19 questions total)
   Questions about whether firearms kept in the home and, if so, who owns them
- Suicide module (14 questions total)
  - Questions about recent and lifetime plans,
    - attempts, and methods
    - Suicidal ideation: "Over the past 12 months, have you had thoughts of taking your own life, even if you would not really do it?"

## Methods: Analysis

- 201 (2.2%) responses omitted for missing data for key firearm or suicide variables
- Steps in analysis
- Description of demographic and suicide characteristics (by presence of a firearm in the home)
- Of those with a suicide plan: Multivariate logistic regression of predictors of having a plan to use a firearm (adjusted for gender and age group)



- 34% overdose; 13% firearm; 12% jump
- Attempt: 0.5%
- Attempt (lifetime): 5%

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	Firearm in home (n=2,915) <sub>Weighted %</sub>	No firearm in home (n=6,568) <sub>Weighted %</sub>	Total (N-9,483) <sub>Weighted %</sub>
Male (p<0.001)	46.9	44.3	45.2
Mean age (p<0.01)	46.9	44.3	45.2
Age group (years) (p<0.001)			
18-34	26.1	34.1	31.3
35-54	41.2	39.2	39.9
>=55	32.6	26.8	28.8
Non-Hispanic white (p<0.001)	83.6	64.0	70.9
Metropolitan area (p<0.001)	75.4	87.6	83.4
Currently employed	63.6	63.0	63.2
Household income below poverty threshold (p<0.001)	4.6	9.5	7.8
> High school education ( $p < 0.05$ )	62.2	59.0	60.3
Currently in a married or unmarried couple (p<0.001)	76.8	61.6	68.0
(Under Pearson chi square tests)			

	Firearm in home (n=2,915) <sub>Weighted %</sub>	No firearm in home (n=6,568) <sub>Weighted %</sub>	Total (N-9,483) <sup>Weighted %</sup>
Suicidal thoughts (past 12 mo.)	8.3	6.9	7.4
Suicide plan (past 12 mo.)	2.2	1.5	1.8
Pills/Overdose (p<0.05)	20.9	45.3	34.4
Firearm (p<0.001)	23.4	4.1	13.4
Jump	11.3	11.5	12.2
Cut	9.1	9.4	9.9
MVC	10.3	6.0	8.5
Suicide attempt(past 12 mo.)	0.51	0.46	0.48
Suicide attempt (ever)	5.3	5.7	5.5
Seek external help "if life not worth living" (p<0.01)	80.6	83.7	82.7

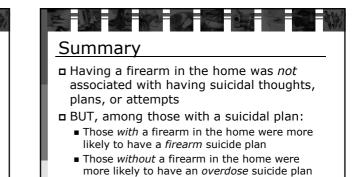
	Plan with firearm (n=20) <sub>Weighted %</sub>	Plan other than firearm (n=155) <sub>Weighted %</sub>	Odds Ratio Adjusted fo Age and Se
Male	59.2	49.4	
Mean Age	38.0	39.0	
Non-Hispanic white	84.2	78.5	1.61
Metropolitan Area (p<0.05)	58.5	86.0	0.23
Currently employed (p<0.05)	29.9	59.9	0.20
Household income below poverty threshold	8.3	12.8	0.68
Above high school education	47.7	60.2	0.64
Currently in a married or unmarried couple	55.8	54.3	1.08
Firearm in home (p<0.001)	81.4	38.3	7.39
Suicide attempt, past12 months (p<0.01)	2.2	18.6	0.10
Suicide attempt, ever	39.5	54.9	0.57
Seek external help for suicidal thoughts	75.3	73.1	1.17

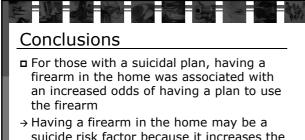
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Limitations

■ 48% response rate

- Weighting variables attempt to adjust for participation and sampling, and many results consistent with prior work
- Relies on self-report for suicide and firearm questions
- No information about timing of firearm access (prior access, access during period of suicidality)
- Cross-sectional
  - Cannot establish temporal sequence, causal relationship, or predictive validity





- suicide risk factor because it increases the likelihood of a lethal attempt (rather than the likelihood of any attempt)
- → Supports means restriction as an important method of suicide prevention

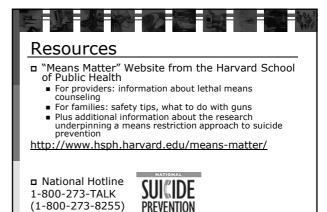


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