

RETHINKING GUN VIOLENCE

Perspectives from Pediatrics & Public Health



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Rethinking Gun Violence: Perspectives from Pediatrics and Public Health

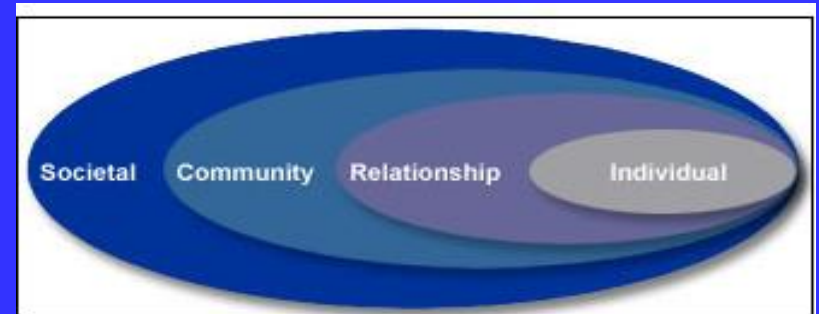
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Overview

- Social-ecological model of violence
- Prevalence of gun violence in US
- Costs of gun violence
- Prevalence of violence among children
- Impact of violence on children and youth
- Relationship between mental health and violence
- Physician's role in gun violence prevention
- Strategies for gun violence prevention
- Current and proposed policies to prevent gun violence

Social-Ecological Model of Violence

- Violence results from dynamic interactions between individuals and multiple levels of influence on behavior
- Key influences at individual, relationship, community, and societal levels can increase or decrease risk of violence perpetration and victimization
 - Individual factors include age, substance use, history of abuse
 - Relationship factors include close relationships with peers, partners, and family members
 - Community factors include schools and neighborhoods
 - Societal factors include societal and cultural norms, health, economic, educational, and social policies



Violence in America

- Injuries are leading cause of death for people 1-44 years old in US
- 55,000 deaths per year due to violence
- Types of violence include child abuse and neglect, intimate partner violence, elder maltreatment, suicide, homicide, and youth violence
- Firearm-related violence is one type of violence that can affect people of all ages

Prevalence of Gun Violence

- More than 30,000 gun-related deaths annually in United States
- Gun homicides: 11,000 deaths annually
- More than all US troops killed in Iraq and Afghanistan in past decade
- 87 gun-related deaths per day: US daily average higher than deaths from any single high-profile gun violence episode

Gun-Related Homicide and Suicide

- Most common causes of firearm deaths are suicide (60%) and homicide (35%)
- US firearm homicide rate compared with other industrialized nations:
 - 20 times higher for all individuals
 - 43 times higher for 15-24 year old

Types of Gun-Related Violence

Incidence of Firearm Injury by Intent, United States, 2010

	Unintentional	Homicide/ Assault	Legal Intervention	Suicide Act	Undetermined	Total
Fatal	606	11,078	344	19,392	252	31,672
Hospital Admitted	5,956	27,377	848	4,385		38,566
Emergency Department Only	8,205	26,361	115	258		34,939
Total	14,767	64,816	1,307	24,035	252	104,925

Gun Ownership in US

- 57 million Americans owned 283 million firearms in 2004
 - Represents 38% of households, 26% of adults having or owning at least 1 gun
 - 60% were long guns
 - 40% hand guns: 50% revolvers, 35% semiautomatic pistols, and 15% other types
- Gun ownership varies by state:
 - 5.2% of all households in District of Columbia
 - 62.8% of all households in Wyoming

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Gun Ownership in Texas

- 36% of households owned firearms
- Households with loaded firearms in home: 12% (national average 7.6%)
- Households with loaded and unlocked household firearm: 8% (national average 4%)
- Among households with children < 18 years old:
 - 8% have firearms in home, more than 400,000 children and youth
 - 4% have loaded and unlocked firearms in home, almost 200,000 children and youth

Costs of Gun Violence

- Direct medical costs of firearm injuries (2010): \$8.4 billion
- Governmental costs: \$ 12.1 billion
- Societal cost (includes direct costs, productivity costs, and quality of life): \$174 billion

Costs of Violent Crime in Dallas

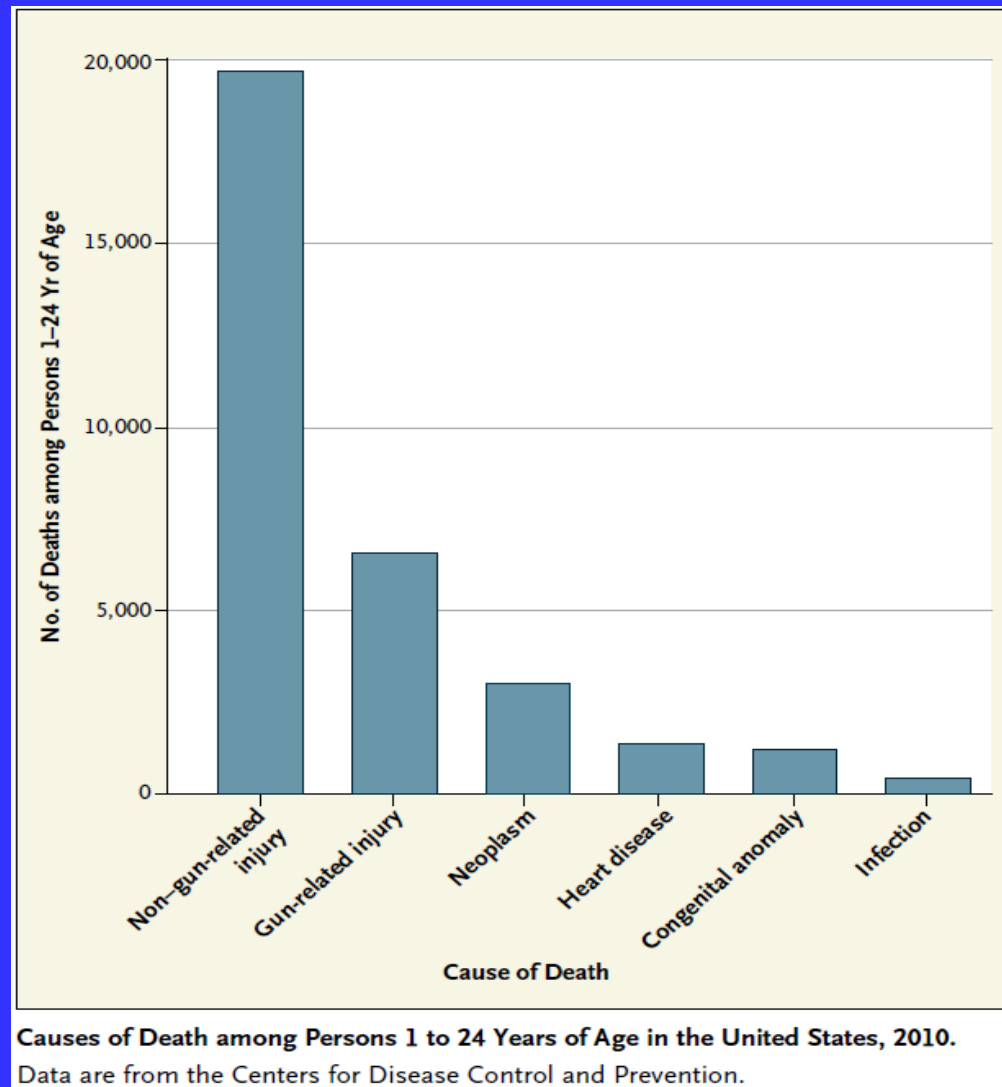
Estimated direct costs of violent crime, by city, 2010 (\$ millions)*

City	Victim costs	Law enforcement and justice system costs				Criminal productivity costs	Total costs	Cost per resident
		Federal	State	Local	Total			
Boston	\$72	\$12	\$48	\$42	\$102	\$24	\$198	\$308
Chicago	\$426	\$64	\$265	\$218	\$547	\$132	\$1,104	\$390
Dallas	\$145	\$20	\$86	\$69	\$175	\$43	\$363	\$278
Houston	\$268	\$47	\$187	\$159	\$393	\$91	\$752	\$330
Jacksonville	\$78	\$12	\$47	\$40	\$100	\$24	\$202	\$246
Milwaukee	\$92	\$14	\$55	\$46	\$115	\$27	\$235	\$388
Philadelphia	\$299	\$41	\$171	\$139	\$351	\$86	\$736	\$472
Seattle	\$21	\$7	\$26	\$23	\$56	\$12	\$89	\$144
Total	\$1,401	\$217	\$885	\$786	\$1,839	\$439	\$3,679	\$320 (ave)

Children and Violence

- Injuries biggest cause of death in US children over one year old
- Youth violence includes:
 - Bullying: 30% of youth involved
 - Fighting/physical assault: 1 in 3 high-school students fights yearly
 - Gang and dating violence
- Disproportionately affects racial/ethnic minorities
 - Homicide leading cause of death for African-American males, 2nd leading for Latino males

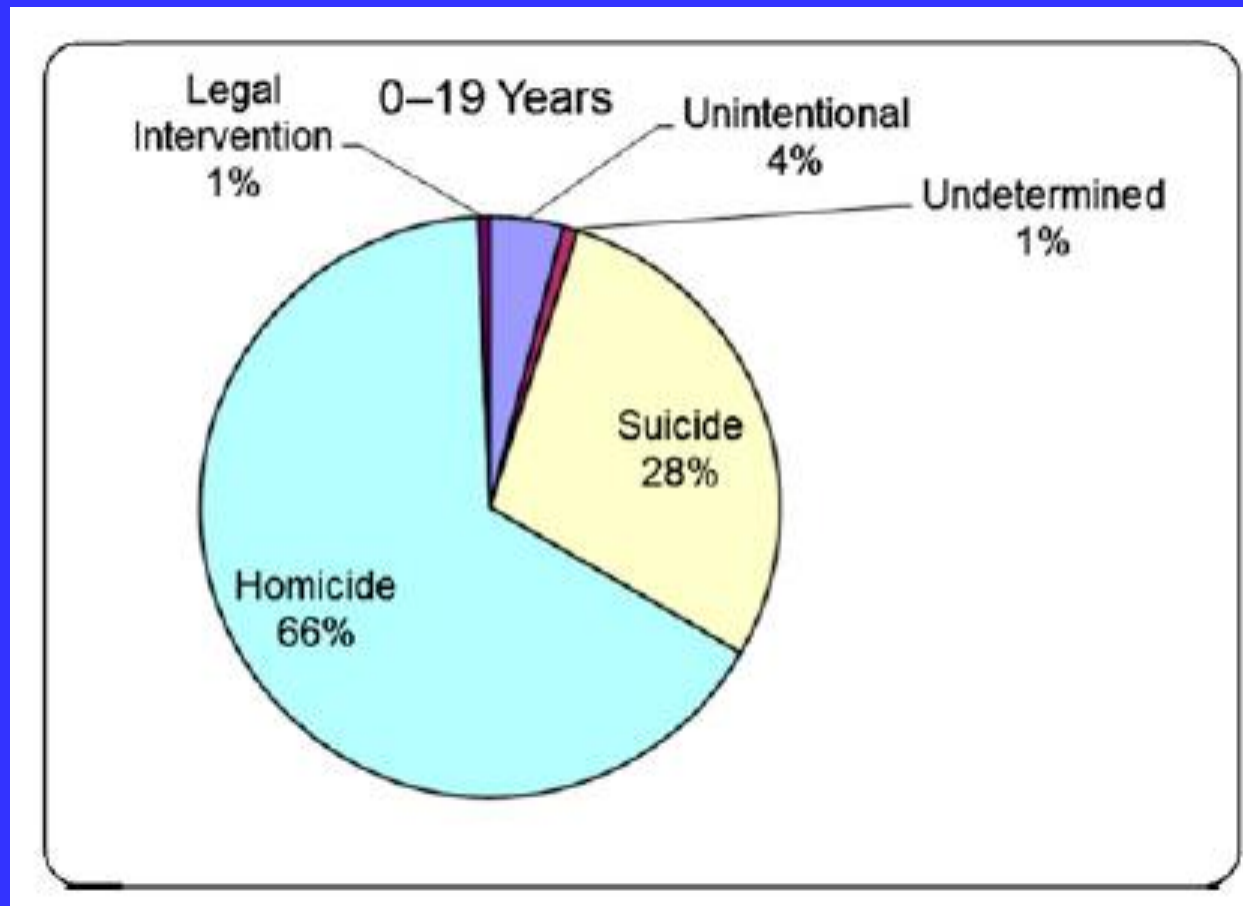
Gun-Related Injuries in Children



Prevalence of Gun Violence Among Children and Adolescents

- 6,570 deaths due to gun-related injuries in children and young adults 1-24 years old in 2010
- 7-15 children or adolescents die from gun-related causes daily in US
- American children 12 times more likely to be killed by a firearm than children in other industrialized countries

Child Injuries from Gun Violence



Developmental Context

- Very young children have little understanding of danger, developmental tasks include exploration of environment
- Early school-age children
 - Influenced by fantasy worlds such as those created by television, movies, video games
 - Less likely than older children and adults to separate fantasy from reality, may not understand that people shot in real life may really die
- Teenagers struggle for acceptance, sense of identity, and independence
 - Higher impulsivity, emotional reactivity
 - May be involved in fighting, alcohol use, drug use
 - More likely to attempt suicide

Gun-Related Suicide

- Suicide 3rd leading cause of death among 15-19 year old youth
- Firearm suicide rates among 5-14 year old US children 8 times higher than other high-income countries
- Suicide among children and adolescents often due to impulsivity
- Guns most common method used for suicide
 - 90% mortality rate for suicide attempts using guns (vs. < 5% for attempts with drugs)
 - Handguns most commonly used, long guns in rural areas
 - Presence of gun in home associated with increased risk of suicide among adolescents, even among those without previous psychiatric diagnosis
 - Higher odds if guns kept loaded in home

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Gun-Related Homicide

- More than 2/3 of US homicides in 2010 committed with firearms, 69% using handguns
- 85% of homicides among 15-19 year old youth were firearm-related
- US firearm homicide rates among 5-14 year old children 17 times higher and among 15-24 year old youth 36 times higher than in other countries
- Highest rates of firearm-related homicide:
 - Major urban areas
 - Among 15-34 year old African American men

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Guns and Domestic Violence

- Most commonly used weapon in domestic homicide
- Presence of gun in home increases risk of intimate partner homicide by fivefold
- 65% of deaths due to domestic homicide from guns
- Loss of life by suicide to women three times more often in homes with guns than in those without guns

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Risks Associated with Guns in Home

- Motivations for gun ownership:
 - Almost three-quarters of handgun owners state self-protection as primary reason
- Presence of a firearm in home results in death or injury to household members or visitors over 12 times more often than to an intruder
- Presence of gun in home associated with threefold increase in risk of homicide, fivefold increase in risk of suicide
- People possessing gun in an assault four times more likely to be shot than those without gun
- Unintentional firearm deaths among US children 10 times higher than other high-income countries

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Consequences of Violence

- More than 60% of children and adolescents exposed to violence annually
- Children in unsafe environments may be subject to “toxic stress”
 - Excessive or prolonged activation of physiologic stress response systems in absence of buffering protection afforded by stable, responsive relationships
- Witnesses of gun violence exhibit higher levels of prolonged grief, dysfunction, and suicidal risks than peers
- Violence-exposed children at higher risk for:
 - Victimization from violence and perpetration of violence
 - Negative health and social-developmental outcomes

Consequences of Violence

- Aggressive and violent behavior developing in childhood or adolescence can persist into adulthood
- Those exhibiting such behavior in childhood and adolescence more likely to be arrested for serious offenses, such as assault and robbery, later in life
- Bullying in childhood can have long-term impact
 - Victims of bullying in childhood more likely to have chronic anxiety and depression, poor psychosocial adjustment in adulthood, and to perpetrate school shootings
 - Children who bully others in childhood at increased risk of depression, delinquency, and criminality in adulthood

Weapon-carrying Among Children and Adolescents

- 5% of students in 9th-12th grade reported carrying guns in past month in 2011: 9% of boys, 1% of girls
- Risk factors for gun-carrying:
 - Gang membership
 - Use of alcohol and other drugs
 - Victimization by violence
 - Perpetration of violence

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School Violence

- Increasing rates of school-associated student homicides
- Primarily due to increase in multiple-victim homicide-suicide events
- Fewer events, but more deaths per event
- Perpetrators have high likelihood of being victims of bullying and having prior suicidal thoughts or attempts

Mental Health and Violence

- Majority of those with mental illness not violent
- Most acts of violence committed by those without mental illness
- Those with severe mental illness more likely to be victims of violence than perpetrators
- Rates of victimization from violence 12 times higher for those with severe mental illness compared with general population
- Increased risk of violence for those untreated and during first episode of psychosis

Public Opinion on Mental Illness

- 46% agree people with serious mental illness more dangerous than general population
- Less than one-third willing to have person with serious mental illness as neighbor or co-worker
- More than half favor mental health benefits be offered by insurance companies, increased governmental spending on mental health treatment, and increased governmental spending on mental health screening and treatment as strategy to reduce gun violence
- Almost 60% agree discrimination against those with mental illness is serious problem
- Only 56% agree most people with serious mental illness can, with treatment, get well and return to normal life

Physicians and Gun Violence

- American Academy of Pediatrics recommends pediatricians screen for violence risk and presence of firearms in home
 - Policy on gun violence states “absence of guns from children’s homes and communities is the most reliable and effective measure to prevent firearm-related injuries in children and adolescents”
- 70% of pediatricians “always or sometimes” ask about presence of guns in home and recommend unloading and locking guns
- 50% of surveyed pediatricians “always or sometimes” recommend removal of guns from house
- Doctors living in states with high levels of gun ownership just as likely to ask about guns in home as those in states with low levels of gun ownership, but likely to counsel families about safe gun storage rather than removal

Physician Counseling on Guns

- Safe gun storage can reduce risk of youth injury and suicide by > 70%
- Receipt of gun-safety counseling from doctors results in higher rates of gun removal and safe storage
- Florida Firearms Owners' Privacy Act (2011): illegal for doctor to conduct preventive screening by asking families about guns in the home, imposes financial penalties, potential loss of licensure
- Permanent injunction by US District Judge banning Florida from enforcing law
- Appealed by Florida governor
- Similar bills introduced in seven additional states

Physician Counseling Resources

- American Academy of Pediatrics (AAP) Connected Kids program
 - For parents of young children, handgun storage placed in context of preventing child access to other dangerous household products
 - Parents of adolescents provides counseling and written materials describing relationship between availability of lethal weapons and fatal teen suicide attempts
- American Academy of Pediatrics Bright Futures toolkit for pediatricians incorporates items concerning gun safety into relevant questionnaires for doctor visits

Effective Strategies for Gun Violence Prevention

- Storing guns unloaded, locked, separately from ammunition decreases risk of unintentional injury and suicide for children and adolescents
- All of these practices reduce risk, findings consistent for handguns and long guns
- Brief physician counseling directed at parents, combined with distribution of gunlocks, may be effective in promoting safer storage of guns in homes with children
- Safe storage campaign with gun safe distribution feasible and effective at limiting household exposure to unlocked and loaded guns

Child Access Prevention Laws

- Impose criminal liability on adults who negligently leave loaded firearms accessible to children or otherwise allow children access to firearms and those firearms used by child to cause injury or death to self or others
- Reduced firearm deaths among children and adolescents by 23% in states where such laws in effect for at least one year
- Associated with lower adolescent suicide rate

Violence-Prevention Programs

- Resiliency-based violence prevention programs: improvement in pro-social behavior and interactions among preschool children
- School-based secondary prevention programs can result in moderate improvements in aggressive behavior
- Social-skills based interventions effective for primary and high school students
- Violence prevention interventions not effective for all groups of children and adolescents

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CeaseFire Program (Chicago)

- Public health program to reduce gun violence among youth
- Work with community-based organizations in high-violence communities
- Street outreach workers identify and build relationships with 14-25 year old youth at-risk for gun violence involvement
- Serve as role models, connect youth to educational and job opportunities, and mediate conflicts between individuals or gangs
- Community mobilization via monthly events

CeaseFire Program Results

- Significant reductions in shootings and retaliatory homicides in majority of intervention neighborhoods
- Replication studies show variable results:
 - Baltimore Safe Streets Program: Effective at reducing gun violence in 3 out of 4 intervention communities
 - Pittsburgh program ineffective in reducing gun violence

Need for Tailored Interventions

- Interventions designed for non-Latino youth ineffective in preventing violence among Latinos and lead to:
 - Increase in violence-related injuries among boys
 - Significant deterioration in academic achievement
 - No improvement in violence
- No effective, evidence-based youth violence prevention programs exist for Latinos
- Greater attention may need to be paid to cultural appropriateness and racial/ethnic differences when designing effective violence-prevention interventions

Ineffective and Inconclusive Strategies

- Gun avoidance programs
 - Designed to educate children to reduce firearm injury
 - Such programs do not prevent risk behaviors
 - May increase gun handling among children
- Effectiveness of gun policies is poorly studied, results are inconclusive

Federal Gun Policies

- Gun Control Act of 1968 prohibits possession of firearms by felons, youth, and those found to be severely mentally ill
- Firearm Owners Protection Act of 1986 prevents federal government from establishing and maintaining national registry of firearms and owners
- Brady Handgun Violence Prevention Act of 1993 requires licensed firearm dealers to do background checks for handgun sales through FBI National Instant Criminal Background Check System (NICS)
 - States not required to submit disqualifying mental health histories
 - Private citizens can sell without license, not supposed to knowingly sell to those in excluded categories, but not federally regulated
 - Firearms shows important method for private sales (over 150 gun shows per year in Texas)
 - Some state laws regulate private sales at gun shows

Private Sales at Gun Shows



Garen J. Wintemute, MD, MPH



Garen J. Wintemute, MD



Categories of People Prohibited from Possessing or Buying Guns

- Felons
- Fugitives from justice
- People addicted to/unlawfully using controlled substances
- Court-ordered dangerously mentally ill people
- People in country illegally
- Dishonorably discharged soldiers
- People who have renounced United States citizenship
- Domestic violence abusers subject to protective order or convicted of domestic violence
- Under 18 years old cannot buy shotguns/rifles, under 21 years old cannot buy handguns

Federal Firearms Ban

- Federal Assault Weapons Ban (1994-2004): banned some semiautomatic weapons, most magazines holding more than 10 rounds of ammunition
 - 18 firearm models explicitly banned
 - Exempted firearms and magazines owned prior to ban
 - Expired in 2004

State and Regional Firearm Bans

- Firearms Control Regulations Act of 1975 in Washington, D.C. restricted handgun ownership
 - 2008 Supreme Court decision (District of Columbia v. Heller): struck down DC handgun ban, concluding 2nd Amendment establishes individual rights to gun ownership
- Chicago ordinance banning handgun possession
 - 2010 Supreme Court decision (McDonald v. City of Chicago): struck down Chicago gun ban, extending 2nd Amendment protections to states and localities
- Since 2008, more than 300 2nd Amendment legal challenges to federal, state, and local gun laws, including laws requiring safe storage of firearms and trigger locks

Gun Violence Research-Related Policies

- Research activities of Centers for Disease Control and Prevention (CDC) restricted by Congress since 1996 by stipulating no funds made available for injury prevention and control “may be used to advocate or promote gun control”
- Resulted in chilling effect on gathering of data on gun violence and on gun violence research
- Affordable Care Act restricts collection and aggregation of data on guns in home

Texas Gun Laws

- No waiting period to buy firearms
- No state registration of firearms
- Permissible to carry concealed handguns with concealed handgun license, rifles/shotguns do not need to be concealed, do not need license
- Open carrying illegal except on own property or while hunting or in gun-related sporting activity
- No restrictions on ammunition or assault weapons
- Motorist Protection Act: May carry handguns, loaded and within reach, in vehicles, as long as they are concealed, rifles/shotguns also may be loaded and within reach and do not need to be concealed
- Child Access Prevention law no storage of loaded firearm on premises if known or reasonably should be known that minor 16 or under likely to gain access without permission unless firearm properly stored, adult can be held criminally negligent if minor causes injury or death to self or another

Public Opinion on Gun Policies

Policy	Proportion (%) in Favor of Policy		
	Non-gun owners	Gun owners	NRA members
Background checks	91	84	74
Assault-weapon bans	77	46	15
Requiring gun licenses	76	60	38
Prison sentence for those knowingly selling guns to someone who cannot legally have guns	76	71	70
Ammunition limits	75	48	19
Locking guns not in use	63	44	31
Restoring rights to gun ownership for mentally ill determined not to be dangerous	29	34	52

2013 Proposed Federal Policies

- Require background checks for all gun sales, strengthen background check reporting system (Passed Senate Judiciary Committee, March 2013)
- Gun trafficking law imposing serious penalties on gun traffickers and “straw purchasers” who pass background checks to buy from licensed purchasers for those prohibited from having guns (Passed Senate Judiciary Committee, March 2013)
- Ban military-style assault weapons, limit ammunition magazines to 10 rounds (Passed Senate Judiciary Committee, March 2013)
- Increase investment in school safety and invest in school-based violence prevention strategies (Passed Senate Judiciary Committee, March 2013)
- Promote use of existing gun safety measures and development of new technologies

Proposed Research and Healthcare Provider-Related Policies

- Direct CDC to research causes of gun violence and prevention
- Expand National Violent Death Reporting System from 18 to 50 states
- Clarify no federal prohibition on healthcare provider reporting of threats of violence posed by patients
- Clarify no federal prohibition or regulation of communication between doctors and patients about firearms

Proposed Policies to Improve Mental Health Services

- Training teachers and other adults to detect and respond to signs of mental illness in children
- Helping school districts to assure children with mental health needs are appropriately referred for services
- Investing in state-based strategies to improve services for 16-25 year old young adults with mental health or substance abuse problems
- Training more mental health professionals to improve access to services
- Requiring insurance plans to cover mental health at same level as physical health care through Affordable Care Act
- Ensuring Medicaid meets obligation to cover mental health equally

Proposed Texas Bills

- Allow concealed carry on public college/university campuses
- Allow those with concealed handgun licenses to carry openly
- Allow more school teachers to carry concealed weapons
- Increase firearms training for school employees
- Require school boards and superintendents to permit teachers with concealed licenses to carry weapons in class
- Reduce training required for concealed handgun licenses
- Allow open carrying of handguns in public places
- Require background checks for buyers at gun shows
- Make it illegal for Texas law enforcement to implement federal laws relating to confiscating or banning firearms, limiting ammunition, taxing firearms or ammunition, or requiring registration of firearm or ammunition

Proposed State and Local Policies

- New York state proposed law requiring assault weapons owners to register weapon with state police, banning magazines holding > 7 rounds of ammunition, requiring background checks for all gun owners, restricting gun ownership for those with certain mental health conditions, and increasing criminal penalties for those with illegal guns
 - Signed into law January 2013
- Other states proposed taxes on guns and/or ammunition to fund mental health services, gun buy-back programs, and victims' services
- Currently 18 states allow teachers and other adults to carry guns on campus
- In 2013, 12 states introduced legislation to extend conceal and carry in schools
- Some municipalities proposed ordinances encouraging or requiring gun ownership

Conclusions

- Gun violence is significant public health problem, resulting in substantial morbidity and mortality, particularly among children and youth
- Access to guns in home and unsafe storage practices increase risk of serious unintentional injury, homicide, and suicide
- Firearm-related injuries are often fatal and primary prevention is essential

Conclusions and Reflections

- Gun violence must be viewed in broader context of interpersonal and community violence
- Multifaceted approach needed, of which gun safety policies are only one component
- Public health framework, such as social-ecological model, can be used to examine interventions at multiple levels of influence

Conclusions and Reflections

- Intervention should begin early with children, addressing aggressive behaviors in childhood and adolescence, such as bullying, and youth violence
- Areas of intervention should include:
 - Violence and suicide prevention programs addressing individual, relationship, and community level risk and protective factors
 - Physician involvement through asking parents about guns in home, ideally recommending removal of guns, or recommending safe storage practices, evaluating and managing mental health problems in patients, and advocating for use of effective bullying and violence prevention programs in local schools and communities
 - Societal level interventions through policies that promote gun safety and improve mental health care for children and adults

Rethinking Gun Violence

- Conversations about gun violence have viewed it mostly as political or criminological issue
- Essential to reframe it as public health issue, one that needs to be addressed for health and well-being of children

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