

HHS Public Access

Author manuscript

Int Rev Psychiatry. Author manuscript; available in PMC 2021 November 17.

Published in final edited form as:

Int Rev Psychiatry. 2021 November; 33(7): 653-661. doi:10.1080/09540261.2021.1887098.

"Firearm access in dementia: legal and logistic challenges for caregivers"

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Abstract

The prevalence of Alzheimer's disease and related dementias (ADRD) is increasing. In the United States, older adults are among those most likely to have firearms in the home. Addressing firearm access among persons with ADRD can be confusing and stressful for family caregivers, healthcare providers, firearm industry representatives and law enforcement. This study sought to examine key stakeholder perspectives concerning legal and logistic considerations for temporary firearm transfers when a person with ADRD owned firearms. A secondary analysis of 24 qualitative interviews conducted to inform the development of a firearm safety tool for ADRD caregivers revealed four types of barriers. These barriers were each associated with logistical challenges and legal ambiguities that hampered ADRD-related firearm transfers: (1) legal questions on firearm ownership and permitted transferees; (2) transfer logistics and duration; (3) issues of engaging law enforcement or retailers for transfers; and, (4) lack of information resources and guidance. Siloes between stakeholder groups persist and limit information sharing. Broad initiatives engaging caregivers, older adults, clinicians, aging service providers, law enforcement, and firearm outlets could inform the development of policies, programs, and practices to enhance the safety and well-being of people with ADRD and their caregivers.

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Disclosure statement

No potential conflict of interest was reported by the author(s).

Keywords

Cognitive impairment; policy; safety; qualitative; caregiver

Introduction

The prevalence of Alzheimer's Disease and related dementias (ADRDs) is projected to increase three-fold in the coming decades, due in part to increasing life expectancy leading to increased risk of ADRD (Hebert et al., 2013), and more older than younger Americans live in homes with firearms (49% versus 35%) (Betz et al., 2016; Morgan et al., 2018; Parker et al., 2020). These factors raise concerns about intentional (i.e. homicide, suicide) and unintentional firearm injuries and deaths among those with dementia and their caregivers (Greene et al., 2007; Patel et al., 2015; Pinholt et al., 2014; Rosen et al., 2019). Healthcare systems and advocacy organisations alike recommend that individuals with ADRD not have access to firearms (Alzheimer's Association, 2019; Veterans Health Administration, 2016). Yet recent work suggests that – although they support such counselling about this topic – few caregivers have ever had a healthcare professional speak to them about firearm safety (Betz et al., 2020).

ADRD caregivers may consider moving firearms out of the home; such transfers can be permanent, if firearms are sold, gifted, or otherwise given to a new owner. Transfers can also be temporary, if firearms are loaned to another person or stored with law enforcement or at a firearm range, retailer, or commercial storage facility. Such temporary transfers can be a short-term solution while a caregiver makes longer-term plans, but the transfer process may be confusing. Federal and state laws specify how firearm transfers may occur, including the need for Federal Firearms Licensees (FFLs) to enact the transfer. Under federal law, FFLs must conduct background cheques on prospective purchasers, but private transfers do not require these cheques. In contrast, state laws outline processes by which individuals can loan, sell, exchange, and gift firearms within their jurisdiction, with some states requiring background cheques on private transfers (McCourt et al., 2017). In these states, a background check at the point-of-sale or as part of a permitting or licencing process may be required. These state laws sometimes include limited exceptions for certain recipients (e.g. family members) or certain types of transfers (e.g. temporary transfers in cases of imminent risk of harm). Prior work has examined how these temporary transfer exceptions impact suicide prevention efforts (McCourt et al., 2017), and how the absence of liability guidelines or protection may inhibit firearm retailers, ranges, or law enforcement from offering firearm storage (Betz et al., 2018; Fleegler & Madeira, 2020; Gibbons et al., 2020).

To assist ADRD caregivers in reducing access to firearms in the home, we previously developed "Safety in Dementia" (SiD), an online decision support tool to clarify options and strategies, the development of which was informed by interviews with a broad array of stakeholders (Polzer et al., 2020). Here, we examine legal and logistical issues that emerged in a secondary analysis of SiD interviews, which may inhibit temporary transfers as an option for safer storage of firearms to prevent intentional and unintentional injuries

within the context of ADRD. This information may be useful for healthcare providers and organisations providing information and support to ADRD caregivers, including firearm industry representatives and law enforcement officials.

Methods

We conducted key informant interviews (October 2018 to October 2019) with medical providers (e.g. geriatricians, neurologists); dementia caregivers (both professional and informal); firearm owners; members of ADRD organisations; and other professionals (firearm retail owners and employees, lawyers and medical reporters) (Polzer et al., 2020). Individuals were eligible for an interview if they were adults (age 18 years) who spoke English and identified as part of at least one of the listed stakeholder groups. Interviewees were recruited through postings on the Alzheimer's Associations Trial Match registry and ResearchMatch, as well as the research team's professional networks. In addition, we used snowball sampling whereby key informants identified others whom they thought it would be important and instructive for our research team to interview. Interviews most often lasted 30–45 minutes, were recorded with permission and professionally transcribed for qualitative analysis. Study and data collection procedures were reviewed and approved by the Colorado Multiple Institutional Review Board (COMIRB 17–0670).

Two investigators (EP and KN) – both medical anthropologists with expertise in qualitative data analysis – conducted a thematic analysis of the 24 stakeholder interviews using a secure qualitative data analysis platform (Dedoose version 8.3.10) (Fereday & Muir-Cochrane, 2006). We used a mixed inductive-deductive approach. Initial codes were from existing theory (predominantly the Transtheoretical Model of Change and the Health Behaviour Model) and extant knowledge on firearms access among older adults (Prochaska et al., 2009; Rosenstock, 1974). Additional codes emerged organically from the text as we under-took consecutive cycles of data review and coding. Team-based discussions, held weekly, allowed us to share insights and reconcile discrepancies in the application of codes (Timmermans & Tavory, 2012). Over 75% of the total corpus of text was double-coded. Inter-rater reliability testing resulted in a Kappa score of .836, indicating high agreement between coders (McHugh, 2012). Once consensus was reached, the remaining texts were coded independently. We then conducted finer analysis of data coded to each primary or parent node to identify themes.

Results

Analysis included data from interviews (*n*=24). Participants were predominantly female (*n*=17) and white (*n*=20). Represented stakeholder groups included those with personal/professional experience with ADRD (*n*=13, 8 personal and 5 professional), firearms owners/enthusiasts (*n*=5), and healthcare professionals (*n*=7). Four themes emerged in relation to ADRD-related firearm transfers: (1) legal questions on firearm ownership and permitted transferees; (2) transfer logistics and duration; (3) issues of engaging law enforcement or retailers for transfers; and, (4) lack of information resources and guidance (Table 1).

Firearm ownership and permitted transferees

A central theme concerned the legality of transferring firearms belonging to the person with ADRD. A caregiver participant provided an example where the person with ADRD was no longer safe around firearms but was unwilling to have them removed: "When we were [going to] try to take [the firearms] out of the house completely, he knew what was going on and went into a rage". Further, one interviewee noted that firearm removal can cause "a lot of concern within the gun community ... That's a loss of a financial asset for the gunowner. And there [is] concern that that would be illegal." Ownership was also important to firearm transferees, especially retailers, ranges, or law enforcement agencies offering storage, as they expressed concerns over the legality of storing firearms without clear proof of ownership. Many transferees acknowledged that "guns routinely get handed off between family members" legally or not, and over long periods of time, making clear and obvious proof of ownership that much more difficult to prove. Outside of "running a background check before giving it back" to the transferee (who may not be the true owner of the firearm), those tasked with storing firearms felt they had few mechanisms available to them to verify ownership in receiving and returning firearms. Potential transferees wanted to assist ADRD caregivers but had reservations about separating a firearm owner from their property without clear legal guidance.

Establishing legal power of attorney or guardianship of the person with ADRD were identified as options for caregivers that allow them to secure ownership of firearms. However, these legal courses of action can be lengthy and costly processes. Extreme Risk Protection Orders (ERPO) in some states allow certain individuals (e.g. family members or law enforcement) to request firearms be removed from individuals who posed a threat to themselves or others (Frattaroli et al., 2019; Wintemute et al., 2019). However, ERPOs also require caregivers to engage the courts; furthermore, they result in firearms being confiscated by law enforcement (versus sold or transferred to a family member). ERPOS are also generally a temporary, time-limited option; in most states, the initial order is for two weeks, with subsequent extension up to one year. Thus, ERPOs may offer caregivers a temporary solution but, ultimately, may not solve the issue of firearm access for the long-term, progressive dementia. ERPOs and other legal options for securing ownership of firearms were largely viewed as an option of last resort. As one caregiver expressed, "A lot of families don't want legal solutions. They just want practical. They're not looking to get involved in the court system with their demented father".

Transfer logistics and duration

In addition to the concern about who owns the firearm and whether transfers are allowable, participants also expressed uncertainties about how transfers would be carried out. Transfer logistics are affected by state laws, which vary widely. In California, "You cannot loan any firearm to anyone unless you are physically going through an FFL," while Colorado allows "a 72-hour temporary transfer, where you just 'no questions asked, just do it." This variability poses a challenge for caregivers who live in a different state than the person with ADRD. One caregiver living in Colorado, noting this challenge, stated that, "With grandma in Oklahoma, if this [had] been an issue, I would've defaulted to Colorado [laws] over Oklahoma".

Some states have amended transfer laws to facilitate temporary transfers when the intent is to prevent imminent harm (e.g. suicide). It is not clear how these provisions relate to cognitive impairment, which in ADRD is a chronic, progressive condition. In addition, these provisions vary regarding with whom a temporary transfer can occur (e.g. direct to family members or only via FFLs) and the duration of the temporary transfer (from hours to "only as long as necessary to prevent death or serious injury") (Col Rev Stat § 18–12–112(6)(h). 2020; O.R.S. § 166.435(1)(a)(f). 2020).

Issues of engaging law enforcement or retailers for transfer

ADRD caregivers may contact local law enforcement agencies or firearm retailers/shooting ranges for assistance with firearm transfers or for storage. However, concerns about liability, lack of comfort in dealing with mental health or cognitive issues, and concerns about returning/retrieving firearms emerged during interviews with these stakeholders as issues that hampered their ability/willingness to serve as resources for ADRD caregivers.

Policies and readiness to assist with firearm storage or disposal may vary across law enforcement agencies, as may the comfort-level of caregivers in engaging local law enforcement. A former police officer explained: "Law enforcement agencies are just [like] gun shops [in the sense that] they have different procedures [for] how they take them in, where they put them, how they give them back." Other participants expressed that caregivers may be reticent to seek the help of local law enforcement; one said: "Some people think that's scary." Another noted that while "law enforcement is great and is definitely very critical", caregivers and other firearm owners may be hesitant to pursue this option because, "depending on what municipality you're in, the police may be very relaxed about this sort of thing or they may be very aggressive".

ADRD caregivers may also turn to firearm outlets for help with transfers or storage. However, interviews with range owners, retailers, and employees revealed concerns about transfer logistics, including accepting and returning firearms for the public (i.e. non-members). As mentioned above, firearm outlets expressed concerns about the logistics and potential liability of storing firearms for a third party, such as for a caregiver who is not the legal owner of the firearm. Additional liability questions emerged related to firearm damage or theft during storage or misuse or injury after returning the weapon. State-level liability protections are generally rare and not well documented (Gibbons et al., 2020).

Participants noted that some caregivers and firearm owners might be apprehensive about the ability to retrieve firearms stored at law enforcement agencies or firearm outlets. In these cases, a formal firearm transfer is generally required, such that a background check would be necessary before returning the firearm – a potential deterrent for some caregivers. This uncertainty about hassle-free firearms retrieval led to reticence among some caregivers to store firearms with local law enforcement, in particular. One respondent noted that storage with other FFLs, as opposed to law enforcement, may be more acceptable. She/he noted, "They have a right to turn them into an FFL for safekeeping. You don't have to turn it into the police, cause getting it back from them is difficult".

Lack of information resources and guidance

Participants felt that, in general, information about firearms had not been integrated into ADRD resources or clinical care. For caregivers, this sometimes mean that, even if available, materials were hard to access or use; one expressed: "families are already so overwhelmed. We need to make [resources] manageable and just give them the information". A medical professional stated that among their peers, "I don't think there is one of those professionals that would even know what to do. It's the gun experts that keep up with the laws." Similarly, participants thought the firearms community generally lacked legal and practical guidance specific to ADRD. Participants from retail outlets and ranges were aware of their responsibility to identify signs of psychological distress and threat of violence and to decline to sell, loan, or return firearms in such instances. However, they were less certain about how they could apply such policies to help respond to requests for assistance from caregivers who were seeking transfer or storage of firearms owned by the person with ADRD. In particular, as mentioned above, they were concerned about when or how to return firearms. Specifically, lack of guidance, coupled with lack of formal training and insight regarding potential warning signs of cognitive impairment or psychological distress, made firearm outlets even more reticent to support transfers and safe storage. As one range owner said: "Who am I to decide whether or not someone is really over that hump or if they've got the home safe in the case of dementia? Whether it's a mental health issue or a dementia issue, I don't have any mechanisms to make that decision."

Discussion

With the growing population of older adults with ADRD has come increased awareness of the injury risks related to firearm access (Morgan & Rowhani-Rahbar, 2020). In this qualitative study, we found that ADRD caregivers, medical providers, and potential community-based resources (like law enforcement and retailers) face uncertainties related to the legalities and logistics of firearm transfer. Caregivers, for example, may find medical professionals uncertain about legal options, firearm retailers unable or unwilling to accept firearms (except on a case-by-case basis), and local law enforcement unsure about their ability to store and return firearms. In the face of these challenges, caregivers may delay moving firearms from the home, but some alternative at-home storage solutions (like acquiring a gun safe) might take longer to implement or be prohibitive due to cost. Consequently, some caregivers may pursue less secure measures, like attempting to hide firearms or transferring firearms to untrained individuals. In the worst case, concerns about engaging community-based resources might lead ADRD caregivers to take no action at all.

Coordinated efforts to clarify policies and support innovative, multidisciplinary work might allow movement beyond whispered words about legally ambiguous means of transferring firearms and piece-meal solutions, such as hoping to find a local firearm retailer willing to make a one-time personal exception and store a firearm. Our data suggest that the lack of clear policies around the legal transfer of firearms when the owner has ADRD or other cognitive impairment is creating problems. Caregivers must navigate a complex web of interwoven state and federal laws on who, how, when, and under what circumstances firearm transfers were allowed. Questions include whether a state requires a transfer to occur

through an FFL, or if a time-limited temporary transfer can is allowable, or what procedures a caregiver should follow when transferring a firearm across state lines. A more robust policy framework, achieved by amending or clarifying existing legal statutes or passing new legislation, could clarify the context, logistics, and duration of temporary transfers in cases of ADRD. A comprehensive framework could also offer greater liability protections and broaden the roles of transferees to accommodate such requests. Other actions might include financial support for firearm outlets and law enforcement to accommodate storage.

Many of these legal questions are not restricted to the context of ADRD, and experiences and approaches from the suicide prevention field may prove useful. Reducing firearm access during times of suicide risk is a core, evidence-based approach and is endorsed by firearm organisations (Sanetti & President, 2019; Office of the Surgeon General, 2012); a key difference is that suicide risk (versus risk from dementia) is usually temporary, so changes in access are generally voluntary ones made by the at-risk person. However, questions related to liability and logistics have posed challenges to firearm suicide prevention (Gibbons et al., 2020; McCourt et al., 2017), and some states have amended background check laws to facilitate temporary transfers for suicide prevention (Sung, 2017).

In this study related to ADRD – as in the suicide prevention fields – diverse stakeholder groups share a commitment to safety, while also offering novel solutions. Collaborative efforts, such as broad taskforces incorporating stakeholder views, could inform development of cohesive policy frameworks and acceptable, sustainable solutions for firearm access in ADRD. Such efforts could also bridge gaps in knowledge, promote information-sharing, and increase access to community resources. For example, healthcare providers and organisations serving older adults can engage in bidirectional communication and training with the firearms and law enforcement communities. Healthcare professionals were not privy to laws regarding firearm transfers, deferring to "the gun experts" to those matters. Facilitating collaborative efforts could better educate healthcare providers on firearm laws in their localities, providing them the ability to more accurately counsel patients and caregivers on potential transfer options. Conversely, firearm retailers and law enforcement officials discussed not having many tools or mechanisms available to them to detect cognitive impairment in potential clients, hindering their willingness to accept and return firearms. Workshops between medical professionals, ADRD caregivers, and these stakeholders could result in the development of educational material or trainings for retail partners or officers who interact with people with ADRD or their caregivers. Following collaborative efforts in suicide prevention (Sanetti & President, 2019), partnerships between the ADRD and firearms communities can lead to the development and dissemination of responsive resources for caregivers (San Diego, 2018). Policymakers can promote the creation of such taskforces and engage with them; stakeholder groups can similarly engage policymakers and provide policy briefs.

While this study focussed on ADRD caregivers, engagement of aging individuals and those with early ADRD is also critical. Following the example of discussions and decisions about when to voluntarily "hang up the keys" and stop driving, older adults who own guns could consider when and how to transfer or sell their firearms (Betz et al., 2018). The use of a "advance directive" about firearms might facilitate conversations and future planning

and, perhaps, decrease caregiver stress in the future (Betz et al., 2018). A recent nationally-representative survey of older gun owners found that only one fifth had a plan (5.6% written, 16.1% unwritten) for securing, removing, or transferring firearms if they became unable to handle them safely, while nearly half had a plan (22.5% written, 25.4% unwritten) for transferring firearms to someone upon death (Betz et al., 2020). These findings highlight opportunities for enhanced education and outreach, including integration of conversations about firearms into planning discussions related to other common aging-related concerns, such as driving or housing.

The dearth of available resources for ADRD caregivers noted in our study also reflects the persistent stigmas around ADRD, and efforts must continue to reduce this stigma and the often invisible challenges of caregiving (Werner et al., 2012). Despite the millions of Americans impacted by dementia, this healthcare crisis and the needs of caregivers are not widely acknowledged or discussed (Herrmann et al., 2018). Through resources such as the Safety in Dementia decision aid (Polzer et al., 2020), among others, healthcare professionals, members of the firearms community, and public health allies can increase access to information about these issues, including safe storage options. While clearer public policy would strengthen the ability to enact the solutions outlined, such resources may help fill an information gap in the interim. Increased access to information, knowledge, and awareness may also increase political will to strengthen the legal framework regarding temporary transfers, thus enabling caregivers and community-based partners to enact the out-of-home storage options highlighted.

A limitation of this study is that it is a secondary analysis of qualitative interviews with a sample of stakeholders. While stakeholders came from different geographic regions and represented different perspectives, our findings may not represent all relevant legal or practical considerations. Our framing of these issues is inevitably influenced by our own professional perspectives in public health, medicine, social work, and anthropology.

Conclusion

Firearms access within the context of dementia is a growing public health concern. Laws regarding temporary transfer of firearms for suicide prevention can offer a useful template. However, the variable sequalae of dementia and the needs of ADRD caregivers bring to the fore a unique set of legal and practical challenges that require nuanced solutions. This work examines these issues and underscores the importance of engaging diverse stakeholders in crafting responsive policy, programs, and practices to promote safety in dementia.

Acknowledgements

We thank the many participants and caregivers for their insights into these issues and the challenges they face. This research was funded via the National Institutes of Health/National Institutes of Mental Health and the National Institute on Aging: Grant Number: R34MH113539-02S. The views expressed here do not reflect those of the National Institutes of Health/National Institutes of Mental Health, the National Institute on Aging, nor any agency of the Department of Veterans Affairs.

Funding

This work was supported by the National Institutes of Health; National Institutes of Mental Health; and the National Institute on Aging: Grant Number: [R34MH113539-02S].

References

- Alzheimer's Association. (2019). Firearm Safety. Published online 2019. Retrieved November 28, from https://www.alz.org/media/Documents/alzheimers-dementia-firearm-safety-ts.pdf
- Betz ME, Azrael D, Barber C, & Miller M (2016). Public opinion regarding whether speaking with patients about firearms is appropriate: Results of a National Survey. Annals of Internal Medicine, 165(8), 543–550. 10.7326/M16-0739 [PubMed: 27455516]
- Betz ME, Azrael D, Johnson RL, Knoepke CE, Ranney ML, Wintemute GJ, Matlock D, Suresh K, & Miller M (2020). Views on firearm safety among caregivers of people with Alzheimer disease and related dementias. JAMA Network Open, 3(7), e207756. 10.1001/jamanetworkopen.2020.7756 [PubMed: 32667652]
- Betz ME, McCourt AD, Vernick JS, Ranney ML, Maust DT, & Wintemute GJ (2018). Firearms and dementia: Clinical considerations. Annals of Internal Medicine, 169(1), 47–49. 10.7326/M18-0140 [PubMed: 29801058]
- Betz ME, Miller M, & Matlock MDDD (2020). Older firearm owners and advance planning: Results of a National Survey. Annals of Internal Medicine, 174(2), 279–282. [PubMed: 33017563]
- Private Firearm Transfers Background Check Required Penalty Definitions, Col. RevisedLegal Statutes § 18–12-112(6)(h) 2020.
- Fereday J, & Muir-Cochrane E (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. International Journal of Qualitative Methods, 5(1), 80–92. 10.1177/160940690600500107
- Fleegler EW, & Madeira JL (2020). First, prevent harm: Eliminate firearm transfer liability as a lethal means reduction strategy. American Journal of Public Health, 110(5), 619–620. 10.2105/AJPH.2020.305635 [PubMed: 32267755]
- Frattaroli S, Hoops K, Irvin NA, McCourt A, Nestadt PS, Omaki E, Shields WC, & Wilcox HC (2019). Assessment of physician self-reported knowledge and use of Maryland's extreme risk protection order law. JAMA Network Open, 2(12), e1918037. 10.1001/jamanetworkopen.2019.18037 [PubMed: 31860108]
- Gibbons MJ, Fan MD, Rowhani-Rahbar A, & Rivara FP (2020). Legal liability for returning firearms to suicidal persons who voluntarily surrender them in 50 US States. American Journal of Public Health, 110(5), 685–688. 10.2105/AJPH.2019.305545 [PubMed: 32191527]
- Greene E, Bornstein BH, & Dietrich H (2007). Granny, (don't) get your gun: Competency issues in gun ownership by older adults. Behavioral Sciences & the Law, 25(3), 405–423. 10.1002/bsl.766 [PubMed: 17559168]
- Hebert LE, Weuve J, Scherr PA, & Evans DA (2013). Alzheimer disease in the United States (2010–2050) estimated using the 2010 census. Neurology, 80(19), 1778–1783. 10.1212/WNL.0b013e31828726f5 [PubMed: 23390181]
- Herrmann LK, Welter E, Leverenz J, Lerner AJ, Udelson N, Kanetsky C, & Sajatovic M (2018). A systematic review of dementia-related stigma research: Can we move the stigma dial? The American Journal of Geriatric Psychiatry: Official Journal of the American Association for Geriatric Psychiatry, 26(3), 316–331. 10.1016/j.jagp.2017.09.006 [PubMed: 29426607]
- McCourt AD, Vernick JS, Betz ME, Brandspigel S, & Runyan CW (2017). Temporary transfer of firearms from the home to prevent suicide: Legal obstacles and recommendations. JAMA Intern Med, 177(1), 96–101. 10.1001/jamainternmed.2016.5704 [PubMed: 27842186]
- McHugh ML (2012). Interrater reliability: The kappa statistic. Biochemia Medica, 22(3), 276–282. 10.11613/BM.2012.031 [PubMed: 23092060]
- Morgan ER, & Rowhani-Rahbar A (2020). Firearm safety in an aging United States. JAMA Netw Open, 3(7), e2011182. 10.1001/jamanetworkopen.2020.11182 [PubMed: 32667649]

Morgan ER, Gomez A, & Rowhani-Rahbar A (2018). Firearm ownership, storage practices, and suicide risk factors in Washington State, 2013–2016. American Journal of Public Health, 108(7), 882–888. 10.2105/AJPH.2018.304403 [PubMed: 29771611]

- Sale or Transfer of Firearms, Or. Revised Statutes § 166.435(1)(a)(f) 2020.
- Office of the Surgeon General (US), National Action Alliance for Suicide Prevention (US). 2012

 National Strategy for Suicide Prevention: Goals and Objectives for Action: A Report of
 the U.S. Surgeon General and of the National Action Alliance for Suicide Prevention US
 Department of Health & Human Services (US); 2012. Retrieved May 31, 2019, from http://
 www.ncbi.nlm.nih.gov/books/NBK109917/
- Parker K, Horowitz J, Igielnik R, Oliphant JB, Brown A Guns in America: Attitudes and Experiences of Americans. Pew Research Center's Social & Demographic Trends Project. 8 5, (2020). Retrieved June 22, 2017, from https://www.pewsocialtrends.org/2017/06/22/americas-complex-relationship-with-guns/
- Patel D, Syed Q, Messinger-Rapport BJ, & Rader E (2015). Firearms in frail hands: An ADL or a public health crisis!. American Journal of Alzheimer's Disease and Other Dementias, 30(4), 337–340. 10.1177/1533317514545867
- Pinholt EM, Mitchell JD, Butler JH, & Kumar H (2014). 'Is there a gun in the home?' Assessing the risks of gun ownership in older adults?. Journal of the American Geriatrics Society, 62(6), 1142–1146. 10.1111/jgs.12836 [PubMed: 24898055]
- Polzer E, Nearing K, & Knoepke C (2020). "Safety in dementia": Development of an online caregiver tool for firearm, driving and home safety. Journal for the American Geriatrics Society, 68(9), 2137–2139.
- Prochaska JO, Johnson S, & Lee P (2009). The transtheoretical model of behavior change. In The handbook of health behavior change (3rd ed., pp. 59–83). Springer Publishing Company.
- Rosen T, Makaroun LK, Conwell Y, & Betz M (2019). Violence in older adults: Scope, impact, challenges, and strategies for prevention. Health Affairs, 38(10), 1630–1637. 10.1377/hlthaff.2019.00577 [PubMed: 31589527]
- Rosenstock IM (1974). The health belief model and preventive health behavior. Health Education Monographs, 2(4), 354–386. 10.1177/109019817400200405
- San Diego AA New: Gun safety program. Alzheimer's San Diego. Published August 10, (2018). Retrieved January 23, 2020, from https://www.alzsd.org/new-gun-safety-program/
- Sanetti SL, President N CEO. AFSP and NSSF: Tremendous Potential to Save Lives AFSP. Published August 29, 2016. Retrieved May 31, 2019, from https://afsp.org/afsp-nssf-tremendous-potential-save-lives/
- Sung JC (2017). Firearms policy and suicide prevention. The American Journal of Psychiatry, 174(12), 1223–1223. 10.1176/appi.ajp.2017.17080873
- Timmermans S, & Tavory I (2012). Theory construction in qualitative research: From grounded theory to abductive analysis. Sociological Theory, 30(3), 167–186. 10.1177/0735275112457914
- Veterans Health Administration (2016). VHA Dementia Steering Committee Recommendations for Dementia Care in the VHA Health Care System Published online 2016. https://www.va.gov/GERIATRICS/docs/VHA_DSC_RECOMMENDATIONS_SEPT_2016_9-12-16.pdf
- Werner P, Mittelman MS, Goldstein D, & Heinik J (2012). Family stigma and caregiver burden in Alzheimer's disease. The Gerontologist, 52(1), 89–97. 10.1093/geront/gnr117 [PubMed: 22048807]
- Wintemute GJ, Pear VA, Schleimer JP, Pallin R, Sohl S, Kravitz-Wirtz N, & Tomsich EA (2019). Extreme risk protection orders intended to prevent mass shootings: A case series. Annals of Internal Medicine, 171(9), 655–658. 10.7326/M19-2162 [PubMed: 31426088]

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Table 1.

Issues, implications, and recommendations related to firearms access and ADRD.

Issue	Illustrative quote	Implications	Recommendation to address issue(s)
Firearm Ownership and Potential Transferees	ntial Transferees		
Ability for ADRD caregivers to transfer or hold firearms owned by person with ADRD	"I don't know the answer to this myself. It just kind of occurred to me would they be required to have a power of attorney to sell their [the person with ADRD's] guns?"	Limits caregiver options for immediate action in transferring firearms out of home, depending on state laws; transferees hesitant to accept firearms that don't belong to a transferor	In relevant statutes, codify ADRD caregivers as permissible persons who can temporarily transfer or hold fireams owned by person with ADRD under their care
Confusions on permitted transferees	"It would be interesting to find out which laws are federally applicable, you know, to see what you can safely say. Like if the family tree rule is a federal law where you can transfer a gun to a first degree relative, like a father to son kind of thing, but you couldn't do brother to brother".	Limits the number of appropriate transferees a caregiver can utilize; may hinder the ability to transfer firearms quickly and effectively to immediate support network	Clarify how transfers may occur between ADRD caregivers and others, whether FFLs, family, non-family, or other agencies and authorities
Transfer Logistics and Duration	tion		
Variability in state laws	"I think there's a lot of confusion over what to do - what they can do legally. I just got an inquiry last week from someone in California saying, 'How do we legally take the guns away from this person? We're afraid of them, and they have dementia.' So - 'cause every state is different, it's kind of difficult [to counse]]".	Confusion and uncertainty regarding legal options available to caregivers, potentially leading to inaction out of fear of illegal acts; limits the ability of practitioners or other community members to appropriately inform caregivers of viable, legal options	Further education and awareness of legal options for caregivers based on their local jurisdiction; larger regional/national pressure to generalize legal statutes for firearm transfers in consideration of cognitive impairment
Variable definitions of "temporary," especially as related to cognitive impairment	"I don't know what the firearm transport laws are, because people can transport them and I don't think you're really asking for emporary storage or some type of thing. And frankly, people have - and again, I don't know what the laws are, so I think you're probably best checking with the people who know the laws to see what the reasonable option is".	Uncertainty on how long caregivers can utilize temporary transfer options; may result in frearms needing to be returned when home still unsafe	Clarify both the length of "temporary" transfers and what events must follow the end of this period Codify an exemption specific to the case of ADRD caregivers
Concerns in receiving, storing, and returning firearms to ADRD caregivers or person with ADRD	"And I think a lot of people are gonna be afraid about giving 'em back. You are dealing with the Second Amendment community - they' re gonna want to give it back maybe more than a law enforcement agency. But I am still worried about whether or not the person coming in to pick it up really has done the - taken the right steps in the home if we're talking about dementia or a mental illness.	Transferees unwilling to accept temporary transfers for injury prevention purposes; caregivers hesitant to transfer firearms if uncertain about ability to get them back hasslefiee	Clarify, through policy and public engagement, the levels of liability that transferees have when receiving, storing, and returning firearms Educate transferee groups on warning signs of cognitive impairment when receiving, returning, loaning, renting, or selling firearms
	"How do you know the crisis has passed?"		
	"You don't. At the end of the day."		
Issues of Engaging Law Ent	Issues of Engaging Law Enforcement or Firearn Retailers for Transfer		
Transferees lack dedicated procedures, facilities, or Resources to accommodate transfers from ADRD caregivers	"I think it's one of the challenges that the gun shops and shooting ranges run into, is location -logistics of where to store 'em. All the firearms that are not part of the retail mix, at least for us, "We lock 'em up at night. And so these would be something that would have to be in that locked up at night area because they're not out here on the retail floor. And we're limited in the space."	Lack of available resources and options for caregivers who desire out-of-home transfers; caregivers discouraged by lack of transfer partners	Provide funding for retailers, ranges, and other agencies (law enforcement, local area agencies on aging) to support temporary firearm storage for injury prevention Engage stakeholders in outlining policies, procedures, and guidelines for transferring and storing firearms

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Issue	Illustrative quote	Implications	Recommendation to address issue(s)
Liability concerns in returning a fream to an unsafe caregiver or person with ADRD; lack of support in identifying potential warning signs in instances of ADRD or cognitive impairment	"It seems like there's a lot of barriers - infrastructure, financially, and then like you were saying, just making sure -not even just in terms of liability but in terms of you making sure that that person's okay to have the gun now "Right, whether it's a mental health issue or whether it's a dementia issue. I don't have any mechanisms to make that decision. I can run them through a background check to give it back. And I guess if anything ever happened I would have to feel like, okay, well, I didn't - I had the best intentions. But it still would be something that would keep me up at night."	Community resources not willing to accept firearn transfers without clear guidance or liability protections (from either private insurers, or through legislation), further heightened by a lack of information regarding common warning signs that could communicated to individuals responsible for handling transfers	Draft and communicate legislation describing liability protections for community resources engaged in firearm transfers for the purposes of injury prevention; further engage these resources with ADRD organisations who can assist in drafting training materials to help retailer/law enforcement better identify signs of cognitive impairment before returning firearms.
Lack of Information Resources and Guidance	es and Guidance		
Siloed expert knowledge and lack of evidence- based, legal resources	"We did a dementia and gun safety workshop for community professionals. So we had adult protective services workers, county staff, different people from the community, professionals in the community where we did this workshop and it was so enlightening because this is stuff that we see in the field all the way but yet we don't have any training on it. Nobody tells us about gun laws and how this all works so it was highly enlightening."	Inability for experts and other community partners to offer practical advice and consultation to ADRD caregivers seeking to transfer firearms out of the home	Form multidisciplinary, cross-sector task forces of local experts to draft public policy and practical solutions that best accord with local needs and affordances. Promote engagement opportunities with ADRD caregiver organisations to better educate and promote firearm safety and to encourage discussion between groups on how to best meet the needs of caracticare.

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