

Research Article

Cars, Guns, Aging, and "Giving Up the Keys"

Marian E. Betz, MD, MPH,^{1,2,*,•} Evan R. Polzer, MA,^{1,3} Christopher E. Knoepke, PhD, MSW,^{4,5} Laura C. Prater, PhD, MPH, MHA,^{6,7} Joseph A. Simonetti, MD, MPH,^{3,8} Teresa M. Lee, MD,⁹ Lauren E. Meador, MPH,^{1,10} and Kathryn A. Nearing, PhD, MA^{2,11}

¹Department of Emergency Medicine, School of Medicine, University of Colorado, Aurora, Colorado, USA. ²VA Eastern Colorado Geriatric Research Education and Clinical Center, Rocky Mountain Regional VA Medical Center, Aurora, Colorado, USA. ³Rocky Mountain Mental Illness Research, Education, and Clinical Center for Suicide Prevention, Veterans Health Administration, Aurora, Colorado, USA. ⁴Division of Cardiology, School of Medicine, University of Colorado, Aurora, Colorado, USA. ⁵Adult and Child Consortium for Outcomes Research and Delivery Science, School of Medicine, University of Colorado, Aurora, Colorado, USA. ⁶Department of Epidemiology, School of Public Health, University of Washington, Seattle, Washington, USA. ⁷Harborview Injury Prevention and Research Center, Harborview Medical Center, University of Washington, Seattle, Washington, USA. ⁸Division of Hospital Medicine, University of Colorado, Aurora, Colorado, USA. ¹⁰Department of Pathology, Stanford Medicine, Palo Alto, California, USA. ¹¹Division of Geriatrics and Multidisciplinary Center on Aging, School of Medicine, University of Colorado, Aurora, Colorado,

*Address correspondence to: Marian E. Betz, MD, MPH, Department of Emergency Medicine, School of Medicine, University of Colorado, 12401 E. 17th Ave., Campus Box B-215, Aurora, CO 80045, USA. E-mail: marian.betz@cuanschutz.edu

Received: May 12, 2022; Editorial Decision Date: September 8, 2022

Decision Editor: Barbara J. Bowers, PhD, RN, FAAN, FGSA

Abstract

Background and Objectives: Age-associated changes can impair abilities for safe driving and the use of firearms. We sought to examine multiple perspectives on reducing access to firearms, including similarities and differences compared to reducing driving.

Research Design and Methods: Online focus groups and 1-on-1 interviews were conducted (November 2020 to May 2021) in the United States with: older adults who drove and owned firearms; family members of older adult firearm owners/ drivers; professionals in aging-related agencies; and firearm retailers/instructors. Recorded sessions were transcribed, coded, and analyzed following a mixed inductive-deductive thematic analysis process.

Results: Among 104 participants (81 in focus groups, 23 in interviews), 50 (48%) were female, and 92 (88%) White. Key similarities: decisions are emotional and challenging; needs change over time; safety concerns are heightened by new impairments; prior experiences prompt future planning; tension between autonomy and reliance on trusted others; and strategies like reframing may ease transitions and avoid confrontations. Key differences: "retirement" was not an acceptable term for firearms; reducing driving may affect daily independence more, but there are few alternatives for the psychological safety conferred by firearms; and there are specific firearm-related legal concerns but more driving-related regulations, policies, and resources.

Discussion and Implications: The similarities and differences in the processes and preferences related to reducing driving or firearm access have implications for the development of resources to support planning and action. Such resources for the public and providers might empower older adults and their families to make voluntary, shared decisions, and reduce injuries and deaths.

Keywords: Advance planning, Driving, Firearms, Guns

[©] The Author(s) 2022. Published by Oxford University Press on behalf of The Gerontological Society of America. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com.

Cars and guns are common in the lives of older adults in the United States: 83% of adults aged \geq 70 years have a driver's license (Insurance Institute for Highway Safety-Highway Loss Data Institute, 2021) and approximately 44% of current drivers drive daily (Ng et al., 2020); 42% of those aged ≥ 65 years live in a home with a firearm (Schaeffer, 2021) and nearly 70% of older firearm owners have handled their gun(s) at least once in the past year (Betz et al., 2021). Both driving and firearm use require physical ability (e.g., manual dexterity, strength, vision, and reflexes) and cognitive processing (e.g., memory and situational awareness); any of these can be affected by myriad medications, medical conditions, or age-related physiologic changes (American Geriatrics Society, 2019; Hemenway et al., 2019; Pinholt et al., 2014). Fatal crash rates rise with age, especially above age 70; in 2020, about 7,500 older adults died in car crashes (Centers for Disease Control and Prevention [CDC], 2022). Rates of violence also vary with age, with high rates of firearm suicide among older men (Rosen et al., 2019). In 2020, approximately 16% of all U.S. firearm deaths (7,135 out of 45,221 total) were among adults aged ≥ 65 years; in the same year, this demographic group accounted for approximately the same proportion (16%) of the U.S. population (CDC, 2021; U.S. Census Bureau, 2022). Prior work has suggested parallels in considerations about driving and firearm access among older adults-particularly when physical or cognitive impairments are present—as both activities may pose a risk of injury or death to the user and to those around them (Greene et al., 2007).

For "driving retirement" (i.e., voluntary cessation of driving), prior work has shown that older adults want to maintain autonomy as long as possible throughout the emotional decision-making process (Betz et al., 2016). Resources exist to support planning for driving transitions, including guidelines, educational materials, "advance driving directives" (American Automobile Association [AAA], 2005; American Geriatrics Society, 2019; Betz et al., 2012; The Hartford, 2018).

The process of "firearm retirement" (i.e., voluntary reductions in access to or use of firearms) may also be an emotional process, and-like driving-should be linked to cognitive and physical function rather than age alone. Firearms are often tied to an individual's identity, culture, family history, and sense of safety and control (Greene et al., 2007; Hirschman, 2003; Kalesan et al., 2016; Pierre, 2019; Simonetti et al., 2020). A current knowledge gap is how to engage older adult firearm owners in making plans for when and how to voluntarily reduce access to or use of firearms. In a nationally representative survey, we found that only 22% of older gun owners had a plan for transferring their firearm in the case of cognitive impairment (Betz et al., 2021). Firearm-specific "advance directives" (Betz et al., 2018) may help older adults and families proactively discuss firearm access and consider setting conditions under which firearm retirement

would occur. However, facilitators and barriers to adoption are unknown.

Prior work has suggested parallels between driving and firearm discussions and decisions (Greene et al., 2007). Here, we sought to explore how stakeholders view the concept of "firearm retirement" and how older adult firearm owners would like the topic addressed, including any conceptual parallels to "driving retirement." Understanding these preferences can help inform the development of culturally-responsive resources and identify new points for intervention.

Method

Study Design

We conducted focus groups (60–120 min) and one-on-one interviews (30–60 min) via Zoom with adults from the key stakeholder groups described later (November 2020 to May 2021). Focus groups allowed group dynamics to stimulate in-depth discussion and spontaneous participant insights. Individual interviews supported exploring sensitive topics and made scheduling feasible with organizational leaders (Creswell, 2009). Participants provided verbal informed consent and received a \$50 incentive.

Investigators leading interviews (L. C. Prater and E. R. Polzer) and focus groups (K. A. Nearing, L. C. Prater, E. R. Polzer, C. E. Knoepke, J. A. Simonetti, and T. M. Lee) had backgrounds in qualitative research and no preexisting relationship with participants. Sessions followed semistructured guides featuring open-ended questions on topics such as the role of firearms in older adults' lives, circumstances where it might be necessary to no longer use or have access to firearms, and the process of planning for those circumstances (Online Supplementary Material Section 1 for the interview guides). Participants were asked to compare these decisions with "retiring" from driving, and sessions explored the concept and term "firearm retirement" and similarities and differences with "driving retirement."

All sessions were recorded, professionally transcribed, and deidentified for analysis. Field notes on general impressions and insights were discussed during weekly team meetings. The Colorado Multiple Institutional Review Board deemed the study exempt.

Study Population

Eligible participants were English-speaking adults living in the United States associated with four groups: communitydwelling older adults (aged ≥ 65 years who drove and owned ≥ 1 firearm); family members (had ≥ 1 older family member who both drove and owned ≥ 1 firearm); health care or community aging-service providers who cared for older adults; or firearm community representatives (e.g., range owners or leaders from firearm organizations). Older adult focus groups were separated by gender, and separate groups were held with family members. Key informant interviews were with health care and aging-service providers and firearm industry representatives.

Focus group of participants were recruited using ResearchMatch, a national registry of research volunteers. Interviewees were recruited through e-mail listservs, social media posts, and professional networks. Snowball sampling augmented participant recruitment (Online Supplementary Material Section 2 for expanded description of methods).

Analysis

The study team included clinicians and researchers experienced in mixed-methods research in firearm safety, aging, Veteran health, and driving. For analysis and reporting, we followed recommended Consolidated criteria for Reporting Qualitative Research (COREQ) guidelines (Online Supplementary Material Section 3; Tong et al., 2007). Analytic material included transcripts and field notes from all sessions. We used a mixed deductive (hypothesis-driven) and inductive (emergent) approach derived from methods used in previous projects by members of the research team (Betz et al., 2022; Thomas et al., 2022). Dedoose analytic software (v 9.0.17: SocioCultural Research Consultants, Los Angeles, CA) was used to support team-based analysis.

The initial codebook was created to reflect research questions and theoretical frameworks explored across focus groups and interviews. These frameworks included the Transtheoretical Model (TTM; Glanz, 2008), which has been applied to myriad health and behavioral decision contexts, including driving cessation (Meuser et al., 2013). This framework holds that drivers progress through-albeit at different rates-a predictable set of stages en route to deciding whether or how to alter their driving behavior. These stages include precontemplation (the older driver with no concerns or plans to stop) through maintenance (the former driver who has maintained mobility through alternative transportation). Some have advocated for the use of the TTM for advance care planning for medical decisions, albeit with the acknowledgment that the temporal, sequential nature of the TTM might not be entirely appropriate (Fried et al., 2009). Coding was conducted by members of the analytic team (E. R. Polzer, K. A. Nearing, L. C. Prater, and T. M. Lee), who independently double-coded 92% of all transcripts, meeting weekly to discuss coding progress and analytic memos and ensure consistency of code definitions and application, and define emerging codes to be applied to later analysis. These emerging insights would allow a deeper contextual understanding from diverse viewpoints, even though they cannot be assumed to cut across all members of the sample (Creswell, 2009). Because this study sought to explore the concept of "firearm retirement" by comparing and contrasting emerging themes with "driving retirement," we organized findings by similarities and differences in these domains.

Results

Of 104 total participants, 60 older adults and 21 family members participated in focus groups (6–8 per focus group); interviews were with 16 health care or agingservice providers and seven firearms community members (Table 1). Health care providers included physicians (e.g., geriatrician and geriatric psychiatrist) and other clinicians who worked with older adults (e.g., social workers, advance practice nurses, and clinical psychologists). Aging services providers included an estate planner who works with older adults with firearms and staff at an association focusing on providing resources to older adults with dementia. Across stakeholder groups, participants identified key similarities (Table 2) and differences (Table 3) in the concepts and processes of reducing driving or firearm use.

Similarities

Emotionally-charged discussions and decisions

A similarity between car and firearm access was the strong psychological attachment and emotions involved. A woman engaged in Veteran health care policy noted the cultural values that imbue cars and firearms with meaning socially, emotionally, and psychologically: "It's freedom. It's agency. It's all those things. And same thing with firearms, it's ability to protect" (INT4-stakeholder). A male psychiatrist had a similar comment: "I think the right to drive and

Table 1. Participant Demographics ($N = 1$	104	4	.)
--	-----	---	----

Characteristic	n (%)
Gender	
Female	50 (48)
Male	54 (52)
Age group—interviews and family members	
18–34 years	11 (28)
35–49 years	8 (20)
50–64 years	15 (38)
65+ years	6 (15)
Age group—older adult focus group members	
65–69 years	14 (24)
70–74 years	26 (45)
75–79 years	15 (26)
80+ years	3 (5)
Primary race	
White	92 (88)
Asian	8 (8)
African American	4 (4)
American Indian/Alaska Native	0 (0)
Hispanic ethnicity	0 (0)
Primary stakeholder group	
Older adult (focus group)	60 (58)
Family member (focus group)	21 (20)
Health care provider (interview)	13 (13)
Aging services provider (interview)	3 (3)
Firearms community (interview)	7 (6)

Ð	
۲p	
Ę	
ЦШ.	
ä	
0	
ц	
õ	
~	
5	
ŝ	
ğ	
Ž	
Ε	
ar	
e	
ίΞ.	
Ъg	
. .	
η	
e	
<u> </u>	
pu	
a	
ng	
. <u>=</u>	
i.	
D	
ũ	
Ω.	
q٢	
Re	
÷	
on	
ď	
s	
.0	
cisi	
De	
eel	
Š	
et	
В	
es	
Ξ	
ar	
'n	
Sih	
g S	
Ĵ.	
'n.	
cer	
ပိ	
S	
te	
Quo	
_	
ve	
Ę	
ntat	
Ð	
res	
<u>o</u>	
Be	
Table 2.	
ble	
Tabl	
-	

Similarity	Older adults	Family/Others
Emotionally-charged discussions and decisions	"I think the same thing with driving, and if you get to the point where you can't drive, it's cer- tainly going to be a big indication that you're getting near the end of your life. And that might be a bigger issue than—than just than even giving up the independence. And same thing with the guns all of a sudden, you know, either you or a relative of yours feels that you no longer have the competence to own guns, besides the loss of—of the notion of independence, it's also pointing out to you that you're getting pretty close to the end of your life, and that might be a harder thing to face up to." (FG6-men) "As we get older, we don't like facing up to anything that reminds us that we're getting old. And having to give up anything that we're used to you really don't like facing up to the fact that your days are numbered." (FG6-men)	"I know for my great grandma we took away her car It does it takes away freedom, and it's a discussion that is really difficult to have." (FG7-female) (FG7-female) (FG7-female) I can imagine that because people are so emotionally attached to driving and firearms are a representation of power that people would not like it It would just be a struggle and argument and you really have to frame it in a way of, if I think like the statistics that show if an older person or a person over this age gets into a car accident, no matter what, they typically get blamed. So, if you have every reason to fire your gun, you're probably going to get blamed for something, and it could be a lot worse. You can talk about the pros and cons of that kind of shame or whatever." (INTT10-female social worker)
Needs and preferences change over time	"I had to give up my motorcycle because I realized I was not as alert and focused when I was driving it and that's taking big chances. I recognize I'm 78, almost 79 all of that applies to having guns around the house. Why keep them in my closet? I can't really picture a reason to ever pull one out." (FG12-men) "It's a progression as you age and as you give up various activities in your life I don't hunt anymore. So, I have really no hunting rifles left anymore. I do some target shooting so, I do have a couple of 22s yet. And I still have the handguns because of living in the boondocks Once I move into a senior living place, I won't have a need for any firearms anymore. So, I will pass them down to my children, and grandchildren at that time." (FG4)	(IN 119-female social worker) "Who really wants to admit that they're no longer capable of re- sponsibly having those weapons? Very few people are. It's like giving up your driver's license. Most people, even though maybe they know that they really shouldn't or can't handle[it]any more, they're going to be reluctant to give up that something they've done their whole life. It's a part of their security or freedom." (INT6-male firearm retailer)
Safety concerns are heightened by impairments	"That's what it comes down to. It's not just your safety. It's the safety of those around you." (FG2-women) "Gun safety, driving, living in your home, being able to turn your stove on and cook and not leave it on and burn the house. All those things are issues we have to face as we get older." (FG13-women)	"I think a lot of the similarities that I noticed a lot of these discussions have happened, because of medical reasons or health reasons where people aren't physically able or mentally able to like handle a firearm or handle driving." (FG7-female)
Prior experiences prompt future planning	"After two tours in Vietnam my PTSD is so bad, my anger issues are so bad, that I don't trust having a gun anywhere near me because I'll blow somebody's head off. I'm adult enough and smart enough to realize that I shouldn't have a gun around me." (FG1-men)	"Caregivers sometimes live daily with a person wanting to pick up the keys to the car to drive. So, it's very much a present visual reminder. Whereas the guns some are really 'out of sight out of mind'." (INT12-female geriatrician)

Table 2. Continued	
Similarity	Older adults
Tension between deci-	"I hope that when I can't drive anymore, i
sion autonomy and	anymore'. My mother used to say 'of co

ension between deci-	"I hope that when I can't drive anymore, my daughter's going to say, 'Mom, you can't drive
sion autonomy and	anymore'. My mother used to say 'of course I can drive, I've never had an accident', she never
reliance on trusted	looked behind her to see the accidents she was causing. And I don't want to be that person, I
others	want to give it up before I'm forced to Same way with weapons" (FG8-women)

driving. So, it's kind of the same thing with guns ... your family really needs to take that over Gun safety as we age is no different from driving ... It's very difficult to give up your car keys to someone (in) your family, or whomever, even though your doctor says you should not be if that's some type of an issue of you injuring yourself or someone else." (FG13-women) th weapons ..." (FG8-women)

younger person that would want it, not somebody my age that I would give it to." (FG12-men) '(Need to ensure) the people that you're passing your firearms on to can take them and safely "I know my child would not want it, but I have lots of nieces and nephews, it would be a "giving up" to Reframing: from "passing on"

"Firearms frequently are handed down ... like a rifle came from your father, or from an uncle ... store them, and safely use them." (FG3-men)

It's like every single one has a memory attached to it." (FG5)

night. I'll be glad to take you wherever you need to go'. And so, he called me a couple of times "I had a neighbor 12 years older than me, who had some real problems with hearing and eyesight, and I found out he was driving at night. And I said, 'you really can't be doing that at and went together." (FG12) Additional approaches to ease transitions confrontations and avoid

when do you give up your car keys? When do you give up your guns? And they're just kind of "It's some combination of planning for a healthy old age. And one of those planning steps is, natural steps of a healthy old age." (FG12)

Family/Others

firearms) would probably be the same people ... probably family "I think that the people involved (in discussions about driving or specifically and maybe spouses if they're still around." (INT8members in both instances, like children of the patient most

ing to say, 'Mom, you can't drive

- "I wish there (was) a guilt-free way for our loved ones to be able brotherness. But if there were guidance rather than a mandate where the big brother part of government, people fear the big people who have to make those decisions for the people who to make that decision for us ... a set of guidelines. ... This is that was available, that would [be] a support system for the can't make them." (FG2-female) psychiatrist)
 - generation. Firearms will last hundreds and hundreds of years. of this family lineage, and I think that that resonates well with able. I have many firearms that I intend to pass on to the next intentions that people already have for their firearms." (INT1-'Passing them on. ... It's the same thing, but it's more approachrifle-hopefully, will be passed on someday. ... Really passing I have some firearms that are over 100 years old, and those think they're very cool. ... I intend to shoot them a lot for the on guns, people view them as something that will stay in sort rest of my life, but they will also-great-grandpa's hunting male firearm instructor)
- larger dialogue, it's not a whole surprise, or too much for them to [Start with] some small dialog, so that when I started like the take in at once." (FG9-male)
- had to lock those guns in the safe, so she couldn't get to them. We to think about all these things where they could hurt themselves, because they just don't know what they're doing." (FG9-female) had been able to take the knobs off the stove. I mean you have With my mom, when she was alive, it was really a concern. We

ē	
<u>ح</u> .	
Ę	
an	
ë.	
ti	
ar	
Ē	
á	
ŝ	
ĕ	
ÅC	
۹ ۲	
Ľ	
ea	
Ë	
6	
.⊆	
nc	
be	
Å	
pr	
ar	
gr	
÷	
÷	
ng	
<u>.</u>	
Ъ	
Re	
μ	
٥٢	
ΑÞ	
s	
L C	
sï.	
eci	
ă	
L L	
ee.	
≧	
Bei	
e S	
ë	
Ē	
er.	
Ť.	
ē	
ng	
Ē	
cer	
ũ	
ō	
s	
ţ	
0	
Οu	
/e	
ntati	
Ð	
es.	
bre	
Be	
ы с	
9	
Table	

Difference	Older adults	Family/Others
Use of the term "retirement" acceptable for driving but not firearms	"I don't think you're ever going to get anyone to retire from the actual physical guns, if they've grown up with them, or they've attached themselves to them, it would just be a question of whether you're going to use them or not." (FG5-women) "If I'm going to retire from firearms, is that giving up everything and I'm done? Or is that eliminating some number of them, or not using them? What does that mean?" (FG8-women)	"And most of the people we're talking about will have been through that (driving) retirement process and l'd be sensitive to the idea that that it worked for some and didn't work for others. So, I could begin a con- versation of some sort about so what was that process of retirement like for you? Were you able to find ways to adapt, meet your interests and needs? Would that work? Do you think you can do that without a firearm?" (INT11-male psychiatrist)
Retiring from driving has a greater impact on one's ability to function independently	"I think it's going to be tougher to give up driving frankly, than it will be to give up firearms. There's a fair bit of independence that goes with the get in the car and go someplace." (FG3-men) "I'd certainly give up my guns before I give up my car keys My guns are not my best friends, they're in the closet. And I have no use for them. So, I don't see any reason why I would oppose giving up my guns, but my relationship to my guns is much weaker than a lot of these other gentlemen here." (FG12-male)	"They don't want to be a burden to someone else. They don't want to have to ask another person for a ride kind of thing. They don't want to impose on my daughter who's already so busy, sort of thing. And so there's a sense of obligation to another human that isn't there so much with the firearms issue." (INT23-female geriatrician) "The difference is that people usually need to drive more than they need to have firearms. So, it's a little more difficult, I think, and it's more of a loss of independence to take someone's keys away versus their guns." (INT17-female social worker supporting older Veterans)
There are fewer alternatives to the psychological safety conferred by firearms	"When your safety (is) involved, it would be more difficult for me to give up the firearms. There's a different safety aspect in the driving as well, but you could take the Uber and the buses and taxis. There's more choices if you gave up the driving." (FG8-women)	"What if they didn't have a firearm and somebody were to come break in their house, and kill them? I would feel guilty if I were to take that away from them, and then something like that would happen. I think there's a huge difference between [driving and firearms] because one, they could potentially die without." (FG7-family-female) "There probably is more of a touchiness about continuing to have firearms, because some people do feel strongly that it's important for personal protection and if you're aging, maybe families or maybe patients themselves feel that 'I must keep this firearm because I'm no longer physically able to care for myself or keep myself safe'." (INT8- female geriatric psychiatrist serving rural area)
Legal concerns related to firearms	"(It) is our Constitutional amendment that allows us to carry firearms, the right to be-ar arms, where driving is not It's that concept that I feel that is ingrained in so many of American people, that is our Constitutional right to carry and bear firearms." (FG5-women)	"There's legality to driving, that you can't drive if you're not able to. There's no legality with firearms." (INT16-female geriatric psychiatrist)

Difference	Older adults	Family/Others
Driving has more regulations, pathways, and resources	"So guns are dangerous things, cars are dangerous things where both (are) capable of killing lots of people. And we make people get a driver's licenses. I think licensure for weapons is quite reasonable. And if it were a national thing, back- ground checks, all the things that the people who want to cite the constitution about owning guns, all that doesn't prohibit licensure, and making sure that people are qualified, it's like, we're entitled to freedom of movement in the US, but we are also restricted from doing certain things during that movement. And I think it's quite reasonable to control and maybe one of those things is going to be an age restriction, although there's no age restriction on driver's licenses, you just have to pass the test occasionally." (FG5-women)	"There's actually resources that if somebody's concerned about driving, we can send them to a driving clinic where they're set up to determine if somebody's actually competent to drive. So, that might be a whole other thing to develop. Are there people who are experts that you take you out—an older person out on a range and talk to them—and go through some assessment that's standardized to make a decision are they safe or not?" (INT15-male psychiatrist) "(The) tricky part as a clinician is that even if you know these (con- cerning) things, it's not like with driving, where you can just report them to the DMV I can call the police if I'm worried about someone who's elderly and with dementia and has a gun. But I don't really know what the outcome would be." (INT20-female geriatrician)

Older adult firearm owners agreed it is important to consider limiting access "when one becomes a danger to oneself and others" due to changes in physical or cognitive functioning and mental health. However, there was also a negative valence surrounding these decisions and how they affected one's identity, along with concerns regarding how these decisions may be perceived by others. Concerns centered around being stigmatized for loss of independence; worries about being perceived as weak, frail, impaired, or incapable of being safe; and fear of social isolation. An older male firearm owner and retailer said: "Who really wants to admit that they're no longer capable of responsibly having those weapons? ... It's like giving up your driver's license" (INT6-stakeholder).

While participants noted the similarity of strong emotions in giving up firearms and cars, they also noted that the difficulty of such decisions could vary depending on an individual's reliance on firearms versus cars (to hunt, to obtain essential goods and services such as food and health care), socially (to connect with others), and emotionally (for a sense of security or independence). One older adult firearm owner said: "Giving up the car keys creates dependence on other people to get out of the house to go anywhere. Giving up the guns, for each person, it's some kind of a loss, I suppose. Not for me. But it doesn't create a dependence" (FG12-men).

Family members expressed concerns about undermining autonomy and harming valued relationships. Feelings of respect for an older adult and lack of confidence in one's own knowledge of firearms complicated the process for family members or care partners as they contemplated initiating conversations about driving or using firearms. A family member noted her fear of alienating her grandmother by bringing up the topics of driving or firearm access: "So, I know that I'm not going to ... say 'Hey, Gram, you need to put that gun away ... Or, you're driving, why don't we just sell your car?' ... I'm not going to give her advice, because she's not going to take it. And in the end, she's going to almost feel more isolated. And my fear, she's going to turn against me" (FG11).

Needs and preferences change over time

Both cars and firearms were noted to have a practical, historical, sentimental, symbolic, and monetary value. Participants noted that over time, there were changes in the meaning of or engagement with cars/firearms. One older male firearm owner said:

"When you're a young kid, you want a fast convertible, red, to race around, pick up chicks. As you get older and you get married, you go with a station wagon or you go with a van. And as you get older, you probably end up with a van that carries a wheelchair. It's a progression of life and it's the same thing with firearms. ... I don't want to carry around a big heavy gun and walk through the woods. I'm over that. Little bit of target practice now and then with the 22LR with my grandchildren, and that's about it. And then, a weapon because I'm out in the middle of nowhere, a weapon for protection, and that's about the limit of my firearms at this point" (FG3).

Safety concerns are heightened by impairments

Generally, the safety of the older adult and their community was linked with an inability to safely perform the activity. A female clinical social worker at a memory clinic commented, "(driving and firearms) both have huge consequences ... for the patients themselves, but also other people. ... You're not only putting yourself at risk, but you're also putting other people at risk" (INT7stakeholder). Many linked both activities, suggesting an inability to do one suggests an inability to do the other. An older man said, "The biggest weapon you have is driving. And when you give up driving, you'll probably give up your firearms as well" (FG3). A male firearms instructor found the comparison helpful for his teaching: "The ability to shoot a firearm and the ability to drive a car, I generally make that comparison all the time whenever I teach a concealed carry class, when I teach any firearms class. 'Hey, if you're not able to drive you shouldn't be able to have a firearm with you'. The same thing will apply to the firearms" (INT18-stakeholder).

Participants generally recognized that considerations about safety are inevitable and consistently said that declining physical and cognitive abilities-whether from medical conditions, medications, or normal age-associated changes in things like vision and reaction time-should prompt action. One older man said: that "when someone is a threat to themselves or others, it is time" (FG3). A female firearms instructor explained: "If you have no idea where you're going, or you can't remember how to get back home, then you should not be driving a car. And if you might not remember the safety rules or you might not remember whether the guns loaded, or something like that, that's the time you need to have that taken away" (INT22stakeholder). Some family members spoke of vague age limits; one said: "When you're too old to use it safely, what about (giving it up then) ... Just like when you get your driver's license you know one day, you're going to have to give it up" (FG9-female). Yet participants also noted variation in age-related changes and did not identify any age at which a person becomes unsafe. A male firearm retailer said, "I've still got friends that in their 90s that are still driving their cars, and they're quite good at it. And then I've got some other people that are just downright scary" (INT14-stakeholder).

Prior experiences prompt future planning

Many participants told stories of restricting access to driving or firearms for neighbors and parents. An older

woman recounted: "My sister and I took my mother to take a driving competency thing in this pretend car, and she didn't know what to do with the pedals and she wasn't looking at the screen and it was it was horrible. And she still felt that she could drive. Thank God, she didn't have a weapon" (FG8). One older male Veteran said of his father: "By the time he got to be 87, he couldn't see to shoot, so he would take me to the range and shoot his loads, just because he wanted to see how accurate they were" (FG6). Older adult firearm owners who had faced these challenges often expressed that their experience led them to initiate planning for themselves. This planning also began earlier, before the development of impairment, with an explicit desire not to burden their families by putting them through something like what they had experienced themselves. The older woman who had spoken of her mother (above), said: "(Starting planning) early is a good thing and just reinforces as you go along, to make sure that it's a subject that the person you're discussing it with is familiar with it. And (with) enough time, maybe it sinks in" (FG8). One older man in a focus group explained:

"There needs to be some type of inventory of those guns, or needs to be access that can be limited ... there's got to be a number of steps that are planned out in advance. ... My dad was an alcoholic, and I remember doing intervention with him, sitting down and talking to him. ... At some point in time ... where you're not able to make those decisions clearly, you got to have everything planned out and it's got to be ready to go, because making those decisions on the spur of the moment will not fly" (FG1).

Similarly, personal experience with chronic illness also appeared to prompt planning in some firearm owners. An older woman spoke of an aborted firearm purchase: "I liked the Glock, but I have arthritis in my hands, and it was difficult for me to cock it ... So with my age, I'm 69, and arthritis, I went, 'I don't think this is a good idea'. Because if I have to use it, and I have any difficulty, just cocking it, I'm going to shoot myself" (FG5).

Tension between decision autonomy and reliance on trusted others

The term "retiring" from driving or using firearms appealed to some older firearm owners because retirement was associated with a voluntary choice. Ironically, while family members or care partners of older adult firearm owners expected that the older adult firearm owner would initiate planning conversations or decisions, older adult firearm owners tended to expect their family or trusted friends to know "when it was time." This tension between the expectations of older adult firearm owners and family members or care partners surfaced during one of the first focus groups. An older man shared: "It's going to be difficult for me to give up driving, just as well as it's going to be difficult for me to give up firearms. But there comes a time and I think inside you know it. You may not want to admit it. You may think you can go a little longer. But in your heart, it's time to give it up'." That same man, however, continued, pointing out his reliance on his family to step in: "I'm sure that like driving, when the time comes, my children will say, 'Give it up'" (FG3). This reliance on family or trusted friends to intervene—and the difficulty of those conversations—was commonly noted. An older man in a different focus group said: "The bottom line is at some point in time if it comes to the point where I'm not capable of handling my guns, that I'm not with it enough to know that I'm not capable, then somebody is just going to have to take away the key" (FG1).

Family members, however, viewed these discussions as very difficult. While they saw they may need to intervene, they were reluctant to do so for a variety of reasons—out of respect for the older adult, uncertainty of when or how to take action, hesitancy due to lack of knowledge of firearms, or concern that approaching the topic might create tension and harm a valued or fragile relationship.

Reframing: from "giving up" to "passing on"

In focus groups, older adults indicated that passing on firearms or cars to a family member (e.g., younger generation) changed the valence of the decision—from "giving up" to "passing on" to the next generation, and that it felt good to know that the item was going to someone who needed it or would enjoy it. An older male firearm owner spoke of a family member who passed on his firearms but continued to hunt: "It was his decision, and he talked with his buddies who were with him, because they're all about the same age ... (he) decided, 'My hunting days are over'. So he turned all his shotguns and other guns over to his two sons, who also hunted. And he went out with them a couple times after, but he didn't carry a gun, he just went with his sons to show them stuff" (FG3).

Participants noted that strong memories attached to either firearms or cars can make it difficult to give them up. The sentimental importance of a firearm or car made it important to find the right person to whom to pass it on to. For example, one male focus group participant spoke of his World War II rifle and his desire to pass it along to someone who would value it: "I'm not interested in selling it for any kind of money. I'd probably give it away if, in fact, I knew that that person was a serious collector and would keep it instead of selling it" (FG12). Similarly, a male family member noted that his mother only felt comfortable passing on her car to him, saying that: "It was important to her to give me her car ... I had to drive it and take her anywhere with the car, but it made her feel that sense of continuity" (FG7). A key consideration with the passing on of firearms was safety. Older adult firearm owners described determining who to pass a firearm onto based on who in the family/their social circle had interest, knowledge of how to properly store and handle a firearm, and the necessary

resources for safe storage. Another man spoke of his plans: "If I pass (my gun) down, I will pass it down to a nephew of mine, who's retired Army infantry. He knows about guns, he'll take care of it, he won't use it where it's not supposed to be. My son has never owned a gun ... and he has no need for it. He doesn't know how to use it safely" (FG14).

Additional approaches to ease transitions and avoid confrontations

During focus groups, older adult firearm owners noted that there was more to planning for "firearm retirement" than they had originally anticipated. They expressed that, given the complexity of these decisions, it was important to have planning conversations with trusted individuals sooner than later. During focus groups, we explored strategies that individuals had tried or felt might be acceptable to support planning and enacting transitions to no longer using firearms/cars. Two approaches emerged: (a) embedding these discussions within the context of other types of life planning and (b) using gradual release of responsibility or tapering as a harm-reduction strategy so that older adults did not have to stop driving or using firearms "cold turkey."

- (1) Many participants suggested embedding firearms and guns in other planning conversations. An older woman who owned firearms said: "(Physicians) ask you about your mental health, are you safe at home ... Why don't they ask if you have a gun plan or gun retirement plan, as well as a driving retirement plan? So, that everybody's sort of thinking about these things now" (FG2).
- (2) Participants also spoke of tapering or gradual reduction to make transitions easier. An older woman explained the importance of this approach as a strategy for respecting the autonomy and dignity of older adults:

"So that it's not this yanking away of the driver's license, or the sugar, or the salt, or whatever it is, that's bad for us, just knocking it off like that. There could be other ways, inventive ways of letting us continue to do what we love, but in a modified way ... So that you don't feel the loss. So, that you are not being altered, that you have not gone away" (FG2).

Another participant spoke of his grandmother's connection to a firearm as an addiction; poignantly, at a different point in the focus group, he also described that his grandmother exhibited early signs of dementia, including paranoia. He shared:

"You can't really go cold turkey with any sort of addiction. ... Her having the firearm is not really a necessity at this point, given how safe she is in her community ... It's more something that she [psychologically] needs to have on her ... So, I think it's slowly being like, 'Okay. Can I borrow it for two days at a time?' Maybe start increasing that afterwards to like three, four days. ... So they feel like they're not losing too much control. That it's like a gradual sort of thing" (FG9-female).

Family members also described ways that they introduced the topic of reducing the use of firearms or cars in ways that were intended to be gradual, recognizing that readiness to make associated decisions needed to be a gradual process. A female family member said: "Maybe (leave out an) article all about elderly folks and guns, or slide some little hints out there, too. Just a mix, kind of get them ready, because it is hard" (FG9). Older adult firearm owners also noted that the best time for these conversations may be during family gatherings (e.g., at holidays) and during an extended visit or walk (i.e., with time for in-depth discussion free from other distractions).

Differences

Use of the term "retirement" acceptable for driving but not firearms

While "retirement" is commonly used to describe the process of transitioning from driving, the term did not resonate consistently in relation to guns. In part, this was due to the ambiguity of the term and whether it meant "retiring" from the activity (i.e., not hunting, carrying, or otherwise using guns), from the object (i.e., no longer owning firearms), or both. The fact that individuals retire and have encore careers added another layer of complexity.

Other participants noted that retiring from firearms was different than retiring from driving. Depending on location, there may be access to alternative forms of transportation; no parallel surfaced during focus group discussions for firearms as a method of personal protection. Underscoring the importance of gradually transitioning from firearms and the activities with which one uses firearms, an older man who is a firearm owner said: "I don't think firearms necessarily are a cold stop, like stop driving. I think it's a progression" (FG4).

Given comments about how the value, meaning or importance of firearms can change across life and focus group participants' descriptions of how they might plan for "firearm retirement" during estate planning, we explored alternative terms like "Firearm Life Planning." Focus group participants' reactions suggested that the words "plan" or "planning" resonated. An older woman who owns firearms said: "The term 'plan' to me is very much more acceptable than to say, 'We're going to talk about when you need to retire your shotgun, or your gun'. ... It's 'plan', and that you're part of the plan ... It's something that you have input (on), and hopefully that you can get others' input (on)" (FG10).

Retiring from driving has a greater impact on one's ability to function independently

While participants described decisions or actions around reducing driving or firearm access as emotionally difficult, they generally noted driving as more linked to practical independence because of its importance for daily mobility. The loss of driving, therefore, could confer a greater sense of loss of autonomy and being a burden to others. A man in a focus group suspected he would "have a harder time giving up the car than giving up the firearm, because the car is really a symbol of my independence, whereas the gun really isn't" (FG6).

There are fewer alternatives to the psychological safety conferred by firearms

Focus group participants who relied on firearms for personal protection were the least likely to conceive of a time when it may be necessary to limit or no longer access firearms. In fact, firearms were viewed as an essential tool for "leveling the playing field" as a physical limitation or limited mobility increased perceived vulnerability, for example, to theft or assault. For these older adult firearm owners, there were no viable alternatives that conferred the same degree of psychological safety. On the other hand, participants noted many options to replace driving, at least in urban areas where public transportation was available. An older man in one focus group, noting his wife could drive him, explained: "I would still be able to get where I needed to go. So, it wouldn't really affect my independence. ... But safety is of prime importance. And so I couldn't give up my gun" (FG6). Similarly, a female care partner in a different focus group worried about the safety of her parents-in-law if they didn't have a firearm: "(Not) driving is just more of an inconvenience, but not owning a firearm could be a matter of life or death in some situations. You never know what will happen" (FG7).

Legal concerns related to firearms

A male from a firearm organization explained: "The biggest difference between cars and firearms is that driving a car is a privilege and owning a firearm is a Constitutional right. ... You can still own a firearm even if you don't have the ability to pick it up and shoot it correctly any longer, or handle it safely" (INT21-stakeholder). A male palliative care researcher and physician commented: "I think the right to drive and the right to keep a firearm are both something that people feel deeply about in terms of their independence, but there is a political side to firearms that I think is different" (INT10-stakeholder).

Some family members and other participants raised questions about legal concerns related to intervening with an older family member. One female family member said:

"In Texas, once my mom was diagnosed with Alzheimer's, I had to make that decision (about driving) right away, because if she had gotten in a wreck, it would have been my responsibility. So, it'd be the same thing with the guns. I don't know what kind of laws or regulations or anything like that are out there as far as older people and any type of diagnosis" (FG9).

Driving has more regulations, pathways, and resources

Participants identified more pathways, policies, and resources dedicated to driving than to firearms. These included options like referring older drivers for evaluation or reporting drivers to Departments of Motor Vehicles (DMVs) and educational resources for older drivers and their family members. A female senior care clinical director explained, "I feel like even though the reason for taking away driving and for limiting firearm access are similar, i.e. cognitive impairment, poor judgment, etc., I don't think the pathways are as well worked out for firearms" (INT5stakeholder). A female financial planner who works with older adults in estate planning commented: "Unlike the driving situation (our group has) not created a transition plan for firearm transfer" (INT13-stakeholder).

Participants identified that there are also more state regulations related to driving. A female geriatrician said: "There's the extra oversight of driving ... having to maintain your driver's license, whereas with firearms, ... I don't think there's a similar governing body or monitoring system" (INT20-stakeholder). Many participants preferred to rely on private decisions about reducing firearm access, rather than having specific laws. A male representative from a firearm organization said: "The (DMV) often has a say when it comes to driving, and there is no (over)arching government entity that would do the same thing for firearm owners, and the (firearms) industry would wish to maintain that position" (INT21-stakeholder).

Discussion

This study of views on the processes of "retirement" from driving and firearms identified important similarities and differences, with implications for clinical practice and the development of resources for older adults, family members, and clinicians and policy makers. Similarities included how reductions should be prompted by declining ability, rather than by age alone. In prior work, we found that clinicians often waited to bring up driving until there were specific concerns, but both clinicians and older drivers supported routine conversations to facilitate advance planning (Betz et al., 2013). The current study supports and expands these findings; firearms could be included with driving and other safety topics in regular counseling to destigmatize the sensitive issue (Betz et al., 2013; Dobscha et al., 2021) and support older adults in making their own decisions.

Safety was a key point mentioned in sessions, including agreement that problems with driving might suggest problems with safe firearm handling and vice versa. At the same time, there were important differences in how participants discussed these safety concerns. While driving was universally seen as something that might increase injury risk, some older firearm owners mentioned maintaining firearms in their homes because they felt they needed them to be safe. This is in line with work with Veterans (Simonetti et al., 2020) and the general population (Mauri et al., 2019; Salhi et al., 2021), showing that many firearm owners perceive access to firearms as critical for safety. For clinicians, family members, and others engaging with older adults in these decisions, understanding the reasons for firearm ownership is an important first step in tailoring counseling.

Participants noted there are more available substitutions for driving, albeit with variable accessibility and acceptability; some older adults may have difficulty using standard public transportation due to physical, cognitive and financial limitations, and many worry about being a burden to others if they ask for rides (Harmon et al., 2018; Vivoda et al., 2021). For counseling about reducing access to or use of firearms, considerations include substitutions for safety (e.g., home alarm systems) and for firearm-related social interactions (e.g., ability to borrow or rent a firearm for supervised use at a firearm range or when hunting, if safe).

Materials have been developed to assist older adults and their health care providers in decision-making related to driving safety (Carr et al., 2010). To date, less has been developed for older adults considering reducing firearm access, with existing resources tailored to safety considerations in dementia (Alzheimer's Association, 2012; Betz et al., 2018; Polzer et al., 2020). In response to this, and informed by findings from this study, our team developed a web-based educational resource for older adults to create a "Firearm Life Plan" (Firearm Life Plan, 2021). This resource enables firearm owners or other trusted individuals (e.g., family, friends, and clinicians) to develop personalized, voluntary, and confidential plans for their firearms, which can be shared with others.

For driving and firearm decisions, the engagement of trusted messengers to disseminate acceptable messages is critical. For driving, this has included leadership from transportation- or mobility-related organizations like American Automobile Association (AAA, 2005) and the American Occupational Therapist Association (Find a Driving Specialist, 2013). Similarly, for firearm-related decisions, firearm instructors and hunter safety, and other firearm organizations may help increase message acceptability and reach. Another promising approach may be to capitalize on peer interactions and group dynamics. Group visits for advance care planning have been shown to increase readiness to complete advance care directives (Lum et al., 2020). In our study, focus group participants appeared to appreciate the insights and ideas of other participants, and some mentioned prior discussions with trusted family or friends and that, as a result of focus group participation, they planned to have follow-up conversations. Future work should explore the utility of integrating planning conversations and resources into existing group-based counseling as one strategy to promote firearm life planning.

Dementia was cited by many participants as an obvious reason for driving and firearm retirement, and drivingrelated resources exist for dementia (Byszewski et al., 2013; Dementia and Driving, 2022; Dickerson, 2014). Recent work has explored approaches to assist caregivers of patients with Alzheimer's disease and related dementias (ADRD) in addressing firearm access (Betz et al., 2019), as ADRD increases the risk of harm towards others and towards self (whether intentional or unintentional; Rosen et al., 2019). Other terminal and chronic illnesses (Akechi et al., 2004a, b; Choi et al., 2019; Draper et al., 2010), as well as conditions resulting in a loss of perceived dignity, may also increase the risk of suicide, although more research is needed to fully understand the link to firearm suicide (Prater et al., 2022).

Limitations of this study include that the sample, although large and geographically diverse, was largely White, and views of other populations may vary. All sessions were held virtually, which facilitated broad engagement and safe interactions during the coronavirus disease 2019 (COVID-19) pandemic, but in-person sessions may have different group dynamics. Qualitative work is, by its nature, exploratory and idea-generating; while these stakeholders' perspectives and opinions are important, they may not reflect those of others.

Areas for future work, in addition to those mentioned earlier, include formal evaluation of messaging, counseling approaches, and resources like the Firearm Life Plan. Additional attention to resources available to-and used by-clinicians is also needed; for driving, clinicians can recommend evaluation by a driving specialist, but no similar options are available for firearm safety. Laws like "Extreme Risk Protection Orders," which allow family or law enforcement to petition a court for the removal of firearms, have been cited as an option for safety concerns in the context of dementia, but more work is needed to understand if, and how, these laws are used in relation to older adults (Prater et al., 2021). Additional policy analysis or clarification may be needed related to firearm purchases or possession when the owner has impaired cognitive capacity, such as the legality of a family member confiscating, selling, or disposing of firearms with law enforcement.

Conclusion

There is an urgent need for usable tools to help adults consider when to reduce driving or firearm use and how to do so with dignity. Usable resources and respectful, thoughtful engagement have the potential to help reduce firearm injuries and deaths while still respecting and promoting older adult independence, autonomy, and rights.

Supplementary Material

Supplementary data are available at The Gerontologist online.

Funding

This work was supported by National Institute on Aging (R01AG059613-03S1 to M. E. Betz). Contents are the authors' sole responsibility and do not necessarily represent the official views of funders or employers.

Conflict of Interest

None declared.

Data Availability

Deidentified data are available from the first author (M. E. Betz) upon reasonable request. This study was not preregistered.

References

- Akechi, T., Okuyama, T., Sugawara, Y., Nakano, T., Shima, Y., & Uchitomi, Y. (2004a). Suicidality in terminally ill Japanese patients with cancer. *Cancer*, 100(1), 183–191. doi:10.1002/ cncr.11890
- Akechi, T., Okuyama, T., Sugawara, Y., Nakano, T., Shima, Y., & Uchitomi, Y. (2004b). Major depression, adjustment disorders, and post-traumatic stress disorder in terminally ill cancer patients: Associated and predictive factors. *Journal* of Clinical Oncology, 22(10), 1957–1965. doi:10.1200/ jco.2004.08.149
- Alzheimer's Association. (2012). Alzheimer's Association: Firearm safety. https://www.alz.org/media/documents/alzheimers-dementiafirearm-safety-ts.pdf
- American Automobile Association. (2005). AAA roadwise review: A tool to help seniors drive safely longer. http://www. aaaexchange.com/MAIN/Default.asp?CategoryID=3&SubCate goryID=38&ContentID=315
- American Geriatrics Society. (2019). *Clinician's guide to assessing and counseling older drivers* (4th ed.). https://www. americangeriatrics.org/programs/older-driver-safety
- Betz, M. E., Jones, J., Petroff, E., & Schwartz, R. (2013). "I wish We could normalize driving health:" A qualitative study of clinician discussions with older drivers. *Journal of General Internal Medicine*, 28(12), 1573–1580. doi:10.1007/s11606-013-2498-x
- Betz, M. E., McCourt, A. D., Vernick, J. S., Ranney, M. L., Maust, D. T., & Wintemute, G. J. (2018). Firearms and dementia: Clinical considerations. *Annals of Internal Medicine*, 169(1), 47–49. doi:10.7326/M18-0140
- Betz, M. E., Miller, M., Matlock, D. D., Wintemute, G. J., Johnson, R. L., Grogan, C., Lum, H. D., Knoepke, C. E., Ranney, M. L., Suresh, K., & Azrael, D. (2021). Older firearm owners and advance planning: Results of a national survey. *Annals of Internal Medicine*, 174(2), 279–282. doi:10.7326/ M20-2280
- Betz, M. E., Ranney, M. L., Knoepke, C. E., Johnson, R. L., Pallin, R., Miller, M., & Wintemute, G. J. (2019). Dementia and firearms: An exploratory survey of caregiver needs. *Journal of General Internal Medicine*, 34(10), 1984–1986. doi:10.1007/ s11606-019-05089-1
- Betz, M. E., Rooney, L. A., Barnard, L. M., Siry-Bove, B. J., Brandspigel, S., McCarthy, M., Simeon, K., Meador, L., Rivara, F. P., Rowhani-Rahbar, A., & Knoepke, C. E. (2022). Voluntary, temporary, out-of-home firearm storage: A qualitative study of stakeholder views. *Suicide and Life-Threatening Behavior*, 52(4), 655–667. doi:10.1111/sltb.12850
- Betz, M. E., Schwartz, R., Valley, M., & Lowenstein, S. R. (2012). Older adult opinions about driving cessation: A role for advanced

driving directives. Journal of Primary Care and Community Health, 3(3), 149–153. doi:10.1177/2150131911423276

- Betz, M. E., Scott, K., Jones, J., & Diguiseppi, C. (2016). "Are you still driving?" Metasynthesis of patient preferences for communication with health care providers. *Traffic Injury Prevention*, 17(4), 367–373. doi:10.1080/15389588.2015.1101078
- Byszewski, A., Aminzadeh, F., Robinson, K., Molnar, F., Dalziel, W., Man Son Hing, M., Hunt, L., & Marshall, S. (2013). When it is time to hang up the keys: The driving and dementia toolkit—for persons with dementia (PWD) and caregivers—a practical resource. *BMC Geriatrics*, 13, 117. doi:10.1186/1471-2318-13-117

United States Census Bureau. (2022). https://data.census.gov/cedsci/

- Centers for Disease Control and Prevention. (2021). Web-based injury statistics query and reporting system (WISQARS). Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. http://www.cdc.gov/injury/wisqars/ index.html
- Centers for Disease Control and Prevention. (2022). Older adult driver safety. https://www.cdc.gov/transportationsafety/older_ adult_drivers/index.html
- Choi, N. G., DiNitto, D. M., Marti, C. N., & Conwell, Y. (2019). Physical health problems as a late-life suicide precipitant: Examination of coroner/medical examiner and law enforcement reports. *Gerontologist*, 59(2), 356–367. doi:10.1093/geront/ gnx143
- Creswell, J. W. (2009). Research design: Qualitative, quantitative and mixed methods approaches. Sage.
- Dementia and Driving. (2022). *Alzheimer's disease and dementia*. https://alz.org/help-support/caregiving/safety/dementia-driving
- Dickerson, A. E. (2014). Driving with dementia: Evaluation, referral, and resources. Occupational Therapy in Health Care, 28(1), 62– 76. doi:10.3109/07380577.2013.867091
- Dobscha, S. K., Clark, K. D., Newell, S., Kenyon, E. A., Karras, E., Simonetti, J. A., & Gerrity, M. (2021). Strategies for discussing firearms storage safety in primary care: Veteran perspectives. *Journal of General Internal Medicine*, 36, 1492–1502. doi:10.1007/s11606-020-06412-x
- Draper, B., Peisah, C., Snowdon, J., & Brodaty, H. (2010). Early dementia diagnosis and the risk of suicide and euthanasia. *Alzheimer's and Dementia*, 6(1), 75–82. doi:10.1016/j. jalz.2009.04.1229
- Find a Driving Specialist. (2013). American Occupational Therapy Association, Inc. http://myaota.aota.org/driver_search/index. aspx
- Firearm Life Plan. (2021). University of Colorado Anschutz Medical Campus. www.firearmlifeplan.org
- Fried, T. R., Bullock, K., Iannone, L., & O'Leary, J. R. (2009). Understanding advance care planning as a process of health behavior change. *Journal of the American Geriatrics Society*, 57(9), 1547–1555. doi:10.1111/j.1532-5415.2009.02396.x
- Glanz, K. (2008). Health behavior and health education: Theory, research, and practice (4th ed.). Jossey-Bass Publishers.
- Greene, E., Bornstein, B. H., & Dietrich, H. (2007). Granny (don't) get your gun: Competency issues in gun ownership by older adults. *Behavioral Sciences and the Law*, 25(3), 405–423. doi:10.1002/bsl.766
- Harmon, A., Babulal, G., Vivoda, J., Zikmund-Fisher, B., & Carr, D. (2018). Planning for a nondriving future: Behaviors and beliefs

among middle-aged and older drivers. *Geriatrics*, 3(2), 19. doi:10.3390/geriatrics3020019

- Hemenway, D., Rausher, S., Violano, P., Raybould, T. A., & Barber, C. W. (2019). Firearms training: What is actually taught? *Injury Prevention*, 25(2), 123–128. doi:10.1136/ injuryprev-2017-042535
- Hirschman, E. C. (2003). Men, dogs, guns, and cars: The semiotics of rugged individualism. *Journal of Advertising*, 32(1), 9–22. doi :10.1080/00913367.2003.10601001
- Insurance Institute for Highway Safety-Highway Loss Data Institute. (2021). Older drivers. IIHS-HLDI Crash Testing and Highway Safety. https://www.iihs.org/topics/older-drivers
- Kalesan, B., Villarreal, M. D., Keyes, K. M., & Galea, S. (2016). Gun ownership and social gun culture. *Injury Prevention*, 22(3), 216–220. doi:10.1136/injuryprev-2015-041586
- Lum, H. D., Dukes, J., Daddato, A. E., Juarez-Colunga, E., Shanbhag, P., Kutner, J. S., Levy, C. R., & Sudore, R. L. (2020). Effectiveness of advance care planning group visits among older adults in primary care. *Journal of the American Geriatrics Society*, 68(10), 2382–2389. doi:10.1111/jgs.16694
- Mauri, A. I., Wolfson, J. A., Azrael, D., & Miller, M. (2019). Firearm storage practices and risk perceptions. *American Journal of Preventive Medicine*, 57(6), 830–835. doi:10.1016/j. amepre.2019.06.017
- Meuser, T. M., Berg-Weger, M., Chibnall, J. T., Harmon, A. C., & Stowe, J. D. (2013). Assessment of Readiness for Mobility Transition (ARMT): A tool for mobility transition counseling with older adults. *Journal of Applied Gerontology*, 32(4), 484– 507. doi:10.1177/0733464811425914
- Ng, L. S., Guralnik, J. M., Man, C., DiGuiseppi, C., Strogatz, D., Eby, D. W., Ryan, L. H., Molnar, L. J., Betz, M. E., Hill, L., Li, G., Crowe, C. L., & Mielenz, T. J. (2020). Association of physical function with driving space and crashes among older adults. *Gerontologist*, 60(1), 69–79. doi:10.1093/geront/gny178
- Pierre, J. M. (2019). The psychology of guns: Risk, fear, and motivated reasoning. *Palgrave Communications*, 5(1), 1–7. doi:10.1057/s41599-019-0373-z
- Pinholt, E. M., Mitchell, J. D., Butler, J. H., & Kumar, H. (2014). "Is there a gun in the home?" Assessing the risks of gun ownership in older adults. *Journal of the American Geriatric Society*, 62(6), 1142–1146. doi:10.1111/jgs.12836
- Polzer, E. R., Nearing, K., Knoepke, C. E., Matlock, D. D., Azrael, D., Siry, B. J., Meador, L., & Betz, M. E. (2020). "Safety in dementia": Development of an online caregiver tool for firearm, driving, and home safety. *Journal of the American Geriatrics Society*, 68(9), 2137–2139. doi:10.1111/jgs.16693
- Prater, L. C., Haviland, M. J., Rivara, F. P., Bellenger, M. A., Gibb, L., & Rowhani-Rahbar, A. (2021). Extreme risk protection orders and persons with dementia in the state of Washington. *Journal* of General Internal Medicine, 36(12), 3885–3887. doi:10.1007/ s11606-020-06273-4
- Prater, L., Mills, B., Bowen, A. G., Rooney, L., Cheung, A., Betz, M. E., & Rowhani-Rahbar, A. (2022). Firearm suicide among persons with terminal illness. *Journal of Pain and Symptom Management*, 63(2), E250–E263. doi:10.1016/j. jpainsymman.2021.10.017
- Rosen, T., Makaroun, L. K., Conwell, Y., & Betz, M. (2019). Violence in older adults: Scope, impact, challenges, and strategies

for prevention. *Health Affairs*, **38**(10), 1630–1637. doi:10.1377/ hlthaff.2019.00577

- Salhi, C., Azrael, D., & Miller, M. (2021). Patterns of gun owner beliefs about firearm risk in relation to firearm storage: A latent class analysis using the 2019 National Firearms Survey. *Injury Prevention*, 27(3), 271–276. doi:10.1136/injuryprev-2019-043624
- Schaeffer, K. (2021). Key facts about Americans and guns. *Pew Research Center*. https://www.pewresearch.org/ fact-tank/2021/05/11/key-facts-about-americans-and-guns/
- Simonetti, J. A., Dorsey Holliman, B., Holiday, R., Brenner, L. A., & Monteith, L. L. (2020). Firearm-related experiences and perceptions among United States male veterans: A qualitative interview study. *PLoS One*, 15(3), e0230135. doi:10.1371/journal. pone.0230135
- The Hartford. (2018). We need to talk: Family conversations with older drivers. The Hartford. https://s0.hfdstatic.com/sites/the_hartford/files/we-need-to-talk.pdf

- Thomas, A. C., Siry-Bove, B. J., Barnard, L. M., Rooney, L., McCarthy, M., Mustafa, A., Rowhani-Rahbar, A., Rivara, F. P., Betz, M. E., & Knoepke, C. (2022). A qualitative study on diverse perspectives and identities of firearm owners. *Injury Prevention*, 28(5), 434–439. doi:10.1136/ injuryprev-2022-044522
- Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated Criteria for Reporting Qualitative Research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal* for Quality in Health Care, 19(6), 349–357. doi:10.1093/ intghc/mzm042
- Vivoda, J. M., Cao, J., Koumoutzis, A., Harmon, A. C., & Babulal, G. M. (2021). Planning for driving retirement: The effect of driving perceptions, driving events, and assessment of driving alternatives. *Transportation Research. Part F, Traffic Psychology and Behaviour*, 76, 193–201. doi:10.1016/j. trf.2020.11.007