



RESEARCH FOUNDATION

RESEARCH FOR THE NFPA MISSION

REQUEST FOR PROPOSALS FOR PROJECT CONTRACTOR

Review of Impact of Medications on Older Adult Fall and Fire Risk

March 23, 2021

Background: Fifty-two million Americans aged 65 or older make up 16% of the total US population. Yet they experience disproportionate injuries and deaths from fires and falls – more than one-third of fire victims between 20014-2018 were at least 65 years old.¹ Falls are the leading cause of death from unintentional injuries for older adults, with nearly 1 in 3 seniors – that’s 17 million people – suffering a fall each year.

Falls send an average of one in every 16 people age 65 or older to the emergency department per year. Fire and EMS now see more fall victims than fire victims, often being called to the same homes repeatedly for minor falls. NFIRS and NFPA Survey data reveal a 35% increase in “assist invalid” incidents from 2014 to 2017. In 2016 and 2017, local fire departments went to more “assist invalid” incidents than structure fires, placing an enormous strain on fire service resources. Falling once doubles the chance that a person will fall again.

The risk factors associated with aging populations are similar for fires and falls, making it critical to educate older adults on adopting prevention and response behaviors. The aging process alone creates limitations such as decreased mobility, vision, hearing and cognitive functioning. Combined with aging homes and appliances, increased clutter and hoarding behaviors, and an increase in the use of medications for chronic conditions, the older adult population is consistently vulnerable to the effects of falls and fires. According to a 2017 RAND Corporation study, 81% of people 65 or older had at least two chronic health conditions. US Census Bureau estimates from 2014-2018 report that 15% of people aged 65-74 and 32% of those 75 and over live with some form of ambulatory difficulty, contributing both to their risk of falling and to their ability to escape a home fire.

Fire service, elder care, and public health professionals have a unique opportunity to reduce the growing incidence of injuries and deaths from fires and falls among older adults. NFPA’s Remembering When™ Older Adult Fire & Fall Prevention Program (RW) joins the fire service with public health agencies to support healthy behaviors among older adults. There is an effort underway to increase RW’s reach and scale by making updated digital training and resources available to program delivery partners. Objectives include developing new standardized messaging on the role of medications in fire and fall risk, creating a database of trained personnel to support local program implementation, and creation of digital training to provide increased access to those who deliver the RW program. This effort is funded by DHS/FEMA Assistance to Firefighters Grant (AFG) Program (Award No. EMW2019-FP-00740).

¹ Ahrens, Marty and Maheshwari, Radhika. “Home Structure Fires”. National Fire Protection Association, Quincy, MA. November 2020.

As part of this effort, the Fire Protection Research Foundation is leading a project to identify the role of medications in the risk of falls, mobility, and risk factors related to fires for people aged 50-64 and 65+. The involves conducting a literature search and healthcare landscape analysis related to older adults, medications, and falls. Results will be used to develop appropriate messaging to be incorporated into NFPA's Older Adult Fall and Fire Prevention program and related assets. This RFP specifically addresses the Foundation-led project and the scope of the Contractor.

Research Goal: Identify the relationship between medication use and fall/fire risk of older adults and generalize findings to inform message development.

Project Tasks:

Task 1: Literature Review. Conduct a literature review on medication use in age groups 50-64 and 65+ and the role of medications related to risk factors for falls/fires. The review should include, but not be limited to, available information on the following topics:

- Burden of fires/falls across geographic, ethnic, socio-economic status, and other key demographic indicators
- Medication use in adults 50-64 years and 65+ years
- Interactions/Impacts of medication use on fall/fire risk factors
- Common medications (specific or classes of meds) associated with fall/fire risks
- Data connecting medication use/interactions with fall/fire risks

Task 2: Healthcare Landscape Analysis. Characterize the healthcare payer landscape related to older adults (65+), medications, and falls by reviewing and analyzing available information that includes, but is not limited to the following topics:

- Centers for Medicare and Medicaid Services (CMS) coverage of fall / fire prevention/intervention programs
- CMS quality indicators (e.g. Five-Star Quality Rating System) for health plans related to falls and injuries among older adults
- Commercial quality indicators (e.g. Healthcare Effectiveness Data and Information Set (HEDIS)) for health plans related to falls, fires, and related injuries for 65+ years population
- Emergency Department data related to fall/fire injuries in older adults
- Potential years of life lost to fires/falls
- Medical costs associated with fires/falls

Task 3: Interim Report. Summarize the information found for Task 1 and Task 2 in an interim report for review by the Technical Panel. This report should summarize all relevant literature, the key points, and any gaps in knowledge.

Task 4: Case Studies. Document three general case studies related to medications and risk factors for falls/fires. These can be specific to a medication or a class of medications.

Task 5: Current fall & fire prevention programs & organizations. Document current fall and fire prevention/intervention programs and organizations. This should include objectives of each program, who the target audience is, impact/results documented, and any other relevant information.

Task 6: Final Report. The final report should include the results of all tasks and document findings that can be generalized to adults from 50-64 and the older adult (65+) population in terms of the relationship between medication use and fall/fire risk. Results should include specific call outs for disparate populations. A draft final report will be reviewed with the Panel and then finalized based on the Panel feedback and comments.

Implementation: This research project is led by the Fire Protection Research Foundation and will be conducted in accordance with the "[Research Foundation Policies for the Conduct of Research Projects](#)". The project will be guided by a Project Technical Panel of stakeholders and subject-matter-experts who will provide input to the project, recommend contractor selection, review periodic reports of progress and research results, and review the final project report. At a minimum, three Panel meetings will be held: project kick-off, review of interim report, and review of draft final report. The Foundation will provide documentation of all Panel meetings. Project contractors must comply with the [Department of Homeland Security \(DHS\) specific acknowledgements and assurances](#).

Deliverables:

- a) *Interim Report*, with the findings from Task 1 and 2 (see Task 3)
- b) *Draft Final Report*, based on all the project tasks (see Task 6)
- c) *Final Report*, following final review by the advisory Panel (see Task 6)

Intellectual Property: The Research Foundation will retain rights to all project deliverables including, the project report, which will be published on the Foundation website. The project deliverables may also include data collected over the course of the project.

Schedule and Costs: The performance period for this DHS FEMA Grant project is until September 2022. The estimated time frame for the Contractor work is 6 months (from May 2021 through October 2021). The project timeline for the Contractor is the following:

RFP Proposals Due:	15 April 2021
Selection of Contractor:	30 April 2021
Work Plan Review (1 st Panel Call):	15 May 2021
Project Interim Update – Task 3 (2 nd Panel Call):	30 July 2021
Draft Final Report – Task 5 (3 rd Panel Call):	30 September 2021
Final Report	31 October 2021

This is a fixed price project in the amount of \$30,000, which includes all indirect costs. The Foundation does not have a limit on indirect costs, but the total proposal cannot exceed this fixed price. There is no expectation of any travel or in-person meetings as part of this project. Since this funding is provided through an AFG Fire Grant, the effort requires a contribution of a **five percent cost share** that will be the responsibility of the Contractor (i.e., \$1,500). Documentation will be required (i.e., invoice) that clearly indicates the full magnitude of the work provided, including the five percent cost share that will be contributed by the Contractor.

How To Respond: Letter proposals (not to exceed six pages) shall be submitted electronically to Amanda Kimball, Executive Director of the Foundation, at akimball@nfpa.org no later than 5:00 pm Eastern time 15 April 2021. For additional details see the "[Research Foundation Policies for the Conduct of Research Projects](#)", the [Foundation Operating Principles](#), and "[Research Project Guidelines for Contractors](#)" on the Foundation website at: <https://www.nfpa.org/foundation>.

Each proposal shall include a description of the following weighted evaluation criteria: problem understanding (30 %), technical merit (include scope and approach) (30 %), and prior relevant experience and personnel expertise (30%). An additional criterion, current level of active foundation engagement, will be considered as the remaining 10 % weighted evaluation criteria.

Please note, the body of the research proposal submittals shall not exceed six pages in length, including a short bio of the proposed personnel and not including the cover page. Any additional relevant information (e.g., Project participants' CVs or resumes, letters of support, detailed description of past relevant experience, detailed description of RFP-Respondent's organizational facilities, competencies, other capabilities, and references) not covered in the body of the proposal should be appended to the proposal, with a maximum combined page limit of 12 pages, including the body of the proposal and appendices.

Additionally, all bidders must submit a completed [disclosure statement](#) with the proposal (this does not count towards the page limit). This form can be downloaded [here](#).

Note: This project will proceed only on the basis of receipt of a proposal deemed acceptable to the Foundation and the project sponsor(s). Information on the Foundation's policies for the conduct of research can be found on our [website](#).