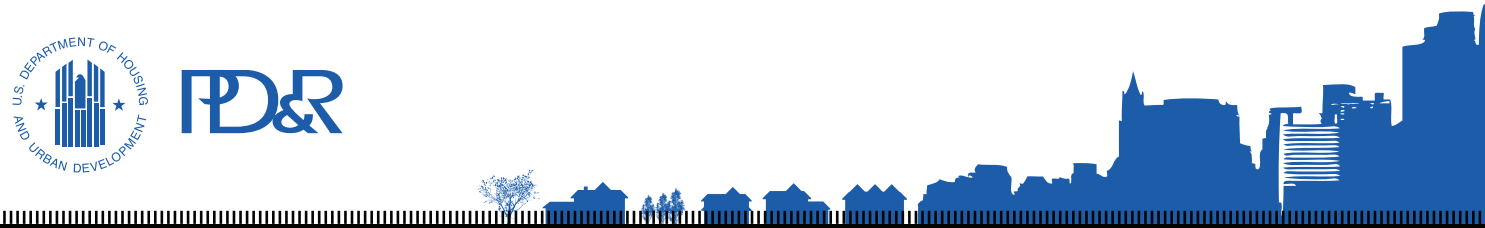
Evaluation of the HUD Older Adult Home Modification Grant Program

Cohort 1 Interim Report



U.S. Department of Housing and Urban Development | Office of Policy Development and Research

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Prepared for
U.S. Department of Housing and Urban Development
Office of Policy Development and Research

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Table of Contents

List of Exhibits

1. Overview

1.1. OAHMP Program

In March 2021, HUD's Office of Lead Hazard Control and Healthy Homes (OLHCHH) issued a Notice of Funding Opportunity (NOFO) for a new Older Adults Home Modification Grant Program (OAHMP) to help older adults function better and remain safely in their own homes (HUD OLHCHH, 2021). The OAHMP was designed to meet mandates listed in the following congressional joint explanatory statement (JES):

> *Aging-in-place home modification grants.* The agreement directs HUD to ensure funds appropriated for the aging-in-place home modification grants reflect the original intent of the program by serving low-income senior homeowners. HUD is further directed to continue to take into account successful models of low-barrier, participant led, holistic approaches to aging in place while designing the aging-in-place program. The agreement directs HUD to track the outcomes of seniors whose homes have been modified in order to better understand the effectiveness of this funding in reducing at-home falls, hospitalizations, and emergency response calls, as well as improving independence and tenure in home over time.[1]

In August 2021, HUD OLHCHH awarded OAHMP grants to 32 nonprofit organizations, state and local governments, and public housing agencies with experience providing home modifications that serve low-income older adults in urban and substantially rural areas. Three of the grantees are not implementing OAHMP activities but instead are serving as grant administrators for an additional 15 subrecipients ("subgrantees") who are delivering OAHMP services in various regions.[2]

The overall purpose of the OAHMP is to help communities implement programs that provide home modifications and limited home repairs to meet the needs of low-income older adult clients as they age. The goal of the program is to enable low-income older adult persons to remain in their homes through low-cost, low-barrier, high-impact home modifications that reduce their risk of falling, enhance general safety, increase accessibility, and improve functional abilities in their homes. The modifications are intended to enable older adults to remain in their homes or "age in place," rather than move to nursing homes or other assisted care facilities.

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[1] U.S. Congress, House Appropriations Committee. 2021. *Division—Transportation, Housing and Urban Development, and Related Agencies Appropriations Act, 2021* [Joint explanatory statement of the Committee on H.R. 116-452]. https://www.appropriations.senate.gov/imo/media/doc/Division%20L%20%20-%20THUD%20Statement%20FY211.pdf.

[2] HUD OLHCHH collects data from the 32 prime OAHMP grantees but does not collect separate data from any of the subgrantees/subrecipients. However, as each of these subgrantees field their own teams to implement the OAHMP, Healthy Housing Solutions is collecting both process and impact data (i.e., client data) from them. For the purpose of this evaluation and report, the term "grantee" is used to describe all 32 prime grantees as well as the 15 subrecipients, for a total of 47 grantees. The three organizations only acting as grant administrators are included in this total and, when reporting on them as a separate group, are referred to as "administrative" grantees.

1.1.1. OAHMP Program Services Model. As stated in the fiscal year 2021 (FY21) NOFO, the OAHMP Program Services Model focuses on low-cost, high-impact home modifications (e.g., installation of grab bars, railings, and lever-handled doorknobs and faucets) and adaptive equipment (e.g., temporary ramps, tub/shower transfer benches, handheld shower heads, raised toilet seats, chair and sofa risers, and nonslip strips for tub/showers or stairs) (HUD OLHCHH, 2021). The OAHMP model primarily relies on the expertise of a licensed occupational therapist (OT) to ensure the home modification addresses the client's specific goals and needs and promotes their full participation in daily life activities. To help maximize the breadth of the program, the OAHMP also supports using licensed OT assistants (OTAs) and certified aging-in-place specialists (CAPS) whose OAHMP work is overseen by licensed OTs.

The OAHMP model incorporates two core concepts: First, as people age, their needs change, and they may need adaptations to their physical environment to live safely at home; second, for any intervention to have the highest impact, the individual's personal goals and needs must be a driver in determining the actual intervention. Program Services Model components are summarized as follows:

- An initial interview and in-home assessment are conducted by a licensed OT, OTA, or CAPS, with the latter two working under the supervision of a licensed OT. The licensed professional interviews the client and caretaker (if available) in the client's home and assesses the home for safety hazards, including the client's fall risk, and/or the client's functional abilities with activities of daily living (ADLs)[3] and instrumental activities of daily living (IADLs).[4]
- A work order is created by the OT, OTA, or CAPS. With the client's consent, the OT, OTA, or CAPS will prioritize necessary home modifications, including additional specifications as necessary.
- Home modification work is conducted by a licensed contractor or, in accordance with local and state regulations, a contractor qualified to perform the required work.
- An in-home followup assessment and inspection is conducted by the OT, OTA, or CAPS, who will also train the client in the safe and proper use of adaptive equipment and home modifications. During this followup visit, the OT, OTA, or CAPS will inspect the home modification work to ensure it meets the work order requirements and, if necessary, will complete a new work order for any needed adjustments.

1.1.2. OAHMP Beneficiary Eligibility Requirements. HUD's OAHMP allows grantees to serve only one beneficiary, or client, per home. The program requires that all OAHMP clients be at least 62 years old, own the home or be the spouse of the homeowner, and primarily reside in

[3] HUD OLHCHH (2021) defined ADLs as "basic self-care tasks that include, for example, bathing, dressing, eating, transferring (e.g., getting in and out of chairs), grooming, using the toilet, and walking."

[4] HUD OLHCHH (2021) defined IADLs as "skills related to independent living which include (but are not limited to) meal planning and preparation; managing finances; shopping for food, clothing, and other essential items; performing essential household chores; communicating by phone or other media; and traveling around and participating in community."

the home to be modified. Additionally, the client's annual household income must not exceed 80 percent of the area median income.

1.1.3. OAHMP Home Modification Cost Requirements. HUD's FY21 OAHMP NOFO capped the cost of home modifications, including labor, contractor services, materials, and supplies associated with structural modifications and adaptive equipment, at $5,000 per home. Grantees must obtain preapproval from HUD OLHCHH if the cost is expected to exceed $5,000 in a given home. This cap excludes the salary of the OT, OTA, and/or CAPS.

In accordance with the congressional directive that the OAHMP provide "low barrier" components, OLHCHH provided a non exhaustive list of examples of home modification maintenance and rehabilitation repair items in the NOFO appendix B and encouraged grantees to choose lower-cost items from the "maintenance" column rather than from the "rehabilitation" column (HUD OLHCHH, 2021). Additionally, the NOFO stated grantees should select home modification activities that minimize the likelihood and scope of a HUD environmental review (under 24 CFR part 50). However, the NOFO also indicated activities that might trigger an environmental review would be acceptable if they were required to meet the needs of low-income elderly homeowners to enable them to remain in their primary residences.

1.2. OAHMP Evaluation

1.2.1. Evaluation Objectives. In September 2020, HUD's Office of Policy Development and Research (PD&R) awarded a competitive contract to Healthy Housing Solutions (Solutions) to conduct a 36-month evaluation of the OAHMP to determine its effectiveness. PD&R charged Solutions and its subcontractor, the National Center for Healthy Housing (NCHH), with the following two primary objectives (HUD PD&R 2020a):

1. **Impact.** Determine how home modifications affect the older adult clients whose homes are modified by measuring changes—between baseline and 6 to 9 months post-home modification[5]—in clients' (1) difficulties with ADLs and IADLs; (2) frequency of at-home falls; (3) quality of life; (4) unplanned emergency room (ER) and hospital visits; (5) tenure in their homes; and (6) falls efficacy (i.e., the confidence an older adult has that they can do various activities without falling).
2. **Process.** Assess (1) how each grantee implements the OAHMP, describing challenges, barriers, and successes they encounter; and (2) clients' opinions of the OAHMP process and the home modifications they received.

1.2.2. Evaluation Protocols and Forms. Solutions' team created a research design/data collection and analysis plan (RD/DCAP or "protocols") detailing the methodology Solutions' team would use to evaluate grantees' OAHMP implementation and the program's impact upon older adults whose homes were modified. The team also developed data collection instruments

[5] The 6- to 9-month post-modification assessment period required under PD&R's evaluation solicitation is supported by prior PD&R-funded research related to the ability to detect long-term changes in ADLs and IADLs (HUD PD&R, 2020b). The Community Aging-in-Place—Advancing Better Living in Elders (CAPABLE) approach, which is a core program model for the OAHMP (Breysse et al., 2022), is one of the only other long-term assessments of home modifications related to the impact on ADLs and IADLs conducted to date.

("forms") to uniformly capture data on clients' health and housing conditions and the modifications grantees installed in their clients' homes. The RD/DCAP documents the protocols and processes that the evaluation staff and OAHMP grantees use to collect data, as well as manage, store, share, and analyze data collected for the evaluation data.

1.2.3. OAHMP Protocol and Form Revisions. In April 2022, after PD&R approved the evaluation protocols and submitted the evaluation's form for Office of Management and Budget (OMB) review, PD&R and OLHCHH asked that Solutions' team revise both the protocols and forms to reduce the burden on FY21 OAHMP grantees (hereafter referred to as "Cohort 1"). With input from HUD, Solutions took the following actions:

- Reduced the number of questions Cohort 1 grantees would ask clients on some forms and reduced the level of detail grantees would include on home modification work documentation.[6] Although shortening the forms lost some key evaluation data requested by PD&R, care was taken to ensure data collected would still meet the minimum requirements of the congressional JES.
- Revised the original requirement for grantees to conduct 6- to 9-month post-home-modification followup client visits (approximately 12 months post-baseline). The intent of these visits was for grantees to readminister baseline forms after adequate time elapsed to capture longer-term impacts of the home modifications on client health and function (see Methodology on page 6). A decision was made to identify less burdensome options for collecting followup data (e.g., have grantees collect data during their program's immediate post-home modification in-home followup assessment and inspection). This change maintains the ability to gather pre- and post-intervention data but will weaken the evaluation's ability to capture the program's full impact.
- Compressed Cohort 1 OAHMP grantee's data collection period from 36 to 12 months.

Appendix A lists the OAHMP evaluation data collection forms, including components such as the number of potential questions and who completes which form at each stage of the home modification and/or evaluation, after the above changes were made.

1.2.4. Evaluation Training for Grantees. Solutions' team provided nine formal training sessions with OAHMP grantees between October 2021 and July 2022 to help them understand the goal of the evaluation and how to integrate its protocols and forms into their individual OAHMP (see exhibit 1). Trainings were recorded and posted to HUD's website to ensure grantee staff could reference as needed as well as provide grantees training tools for new hires. When requested, Solutions has also provided additional training and refresher courses with individual grantees in response to staff turnover, as they launched their OAHMP, and/or as they began collecting evaluation data.

[6] The originally designed home modification documentation form asked grantees to list each work task performed in the client's home along with the associated funding source; i.e., OAHMP-funded work versus work performed with other funding sources. This breakout was intended to provide the total costs of the home modifications, as well as determine how and what additional funding, if any, was leveraged with the OAHMP. The redesigned form asks grantees to list only work tasks specifically funded by the OAHMP.

Exhibit 1. OAHMP Grantee Trainings

Date	Training	Description
22-Oct-21	Evaluation Overview (1 hour, 30 minutes)	An overview of how the evaluation of the Older Adult Home Modification Program will work and the forms involved in the evaluation once the OAHMP launches.
02-Dec-21	Training on Paper Forms (2 hours, 45 minutes)	Grantee training on paper forms which were utilized until the evaluation received OMB clearance and REDCap was programmed.
01-Feb-22	OLHCHH Grantee Onboarding (1 hour, 30 minutes)	A brief overview and Q&A session held as part of OLHCHH's grantee onboarding sessions conducted February 2022.
21-Jun-22	Central/South Region #1	Grantee regional trainings on changes to the evaluation's protocols and forms, along with instructions on how to use the REDCap platform to enter evaluation data. Trainings were approximately 90 minutes and provided in each region twice to ensure as many grantee staff as possible could participate.
27-Jun-22	Northeast Region #1	
28-Jun-22	West/Midwest Region #1	
06-Jul-22	West/Midwest Region #2	
07-Jul-22	Central/South Region #2	
11-Jul-22	Northeast Region #2	

OAHMP = Older Adults Home Modification Grant Program. OLHCHH = Office of Lead Hazard Control and Healthy Homes. OMB = Office of Management and Budget.

1.3. Program and Evaluation Launch

Although Solutions initially intended to begin the OAHMP evaluation in early spring 2021, preliminary project setbacks, including OLHCHH's delayed release[7] of the FY21 OAHMP NOFO, announcement of grantee awards, and onboarding of the selected OAHMP grantees, substantially pushed back the program and, consequently, the evaluation launch date.[8]

In late January and early February 2022, HUD conducted the OAHMP onboarding process, and grantees began implementing the OAHMP in their communities. Grantees continued to launch their programs in a staggered fashion over the next few months. Solutions' team created paper versions of the evaluation forms that grantees could employ as the grantees initiated their respective programs to both assist grantees and potentially capture early data while the evaluation was undergoing OMB review. In July 2022, once PD&R obtained OMB evaluation approval, grantees began collecting evaluation data via REDCap, the Health Insurance

[7] Solutions learned OLHCHH's project setbacks were compounded by the COVID-19 pandemic, staffing and capacity challenges related to introducing a new federal program, and the onboarding and training of a new government technical representative (GTR) to support the OAHMP.

[8] Program delays also impacted the evaluation protocols and forms as Solutions was unable to review the OAHMP NOFO prior to drafting these documents. Upon release of the NOFO, Solutions had to revise the evaluation documents and update the OMB package with the increased number of grantees and clients served. This, in turn, delayed PD&R's submission to OMB for review and approval of the evaluation and associated forms.

Portability and Accountability Act- (HIPAA) secure electronic platform that Solutions' team is using to collect, store, and manage data (see REDCap text box).

2. Methodology

Exhibit 2 summarizes the OAHMP and evaluation workflow to illustrate the relationship between program and evaluation activities and identify the evaluation forms grantees complete at each step. Forms marked in green are evaluation forms that grantees may choose to also employ for program purposes. If grantees chose to use other forms for program purposes, they are still required to complete all evaluation forms programmed in REDCap (see text box).

REDCap: "Research Electronic Data Capture"

All OAHMP evaluation data are collected, uploaded, stored, and managed in Vanderbilt University's REDCap system, accessible only to designated Solutions team members and grantee staff. REDCap is a web-based, HIPAA-compliant environment for building and managing noncommercial projects. Its security protocols protect the stored data as well as information pertaining to the identity and activity of REDCap end-users (Harris et al., 2009; Harris et al., 2019). The OAHMP evaluation project is securely hosted by Vanderbilt University's Data Coordinating Center. Grantees may use the REDCap mobile app on Apple or Android phones and tablets to collect data in client homes when there is no Internet connection.

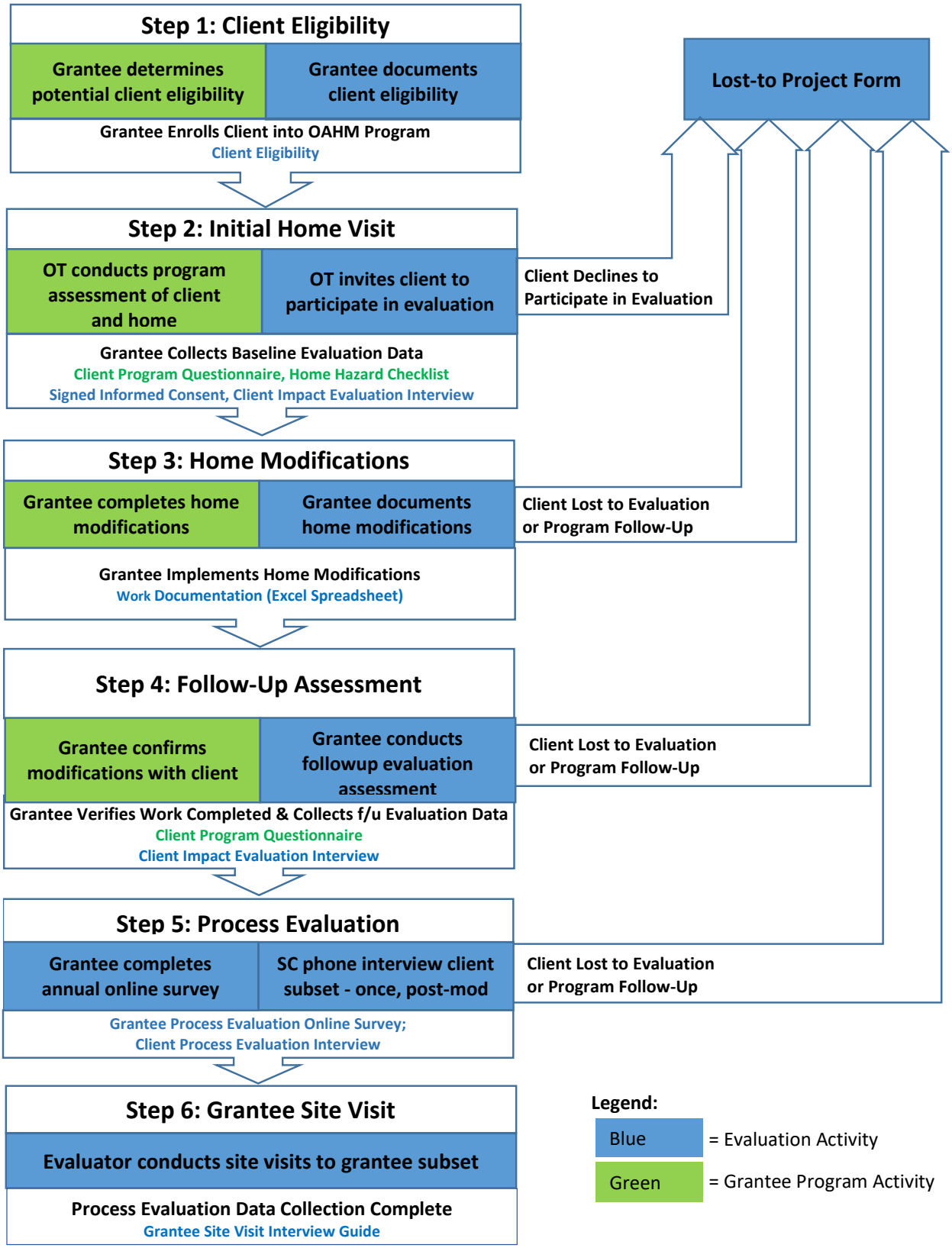
2.1. Impact Evaluation

2.1.1. Client Eligibility. In step 1, grantees complete a **Client Eligibility Documentation Form** for each client they deem eligible for the OAHMP using their own eligibility protocols.[9]

2.1.2. Initial Home Visit. In step 2, grantees conduct initial home visits to interview clients on their functional capacity and falls risk using the **Client Program Questionnaire** and assess homes for safety hazards using the **Home Hazard Checklist**. They also complete and obtain an **informed consent** from each client who agrees to participate in the evaluation. Once a client signs the informed consent form, grantees administer the **Client Impact Evaluation Interview**. If a client declines to sign the informed consent, they and their home may continue to participate in the OAHMP, but grantees must complete a **Lost-to-Project** form to document that the client chose to not participate in the evaluation.

[9] Although grantees use OAHMP and their own protocols to determine client eligibility, the evaluation's client eligibility form was designed to provide Solutions contact information for the random client process survey and client demographic, as well as information track potential clients who were deemed not eligible for the program and reasons why, as well as provide. FY21 grantees were later instructed only to complete forms for clients specifically eligible for the OAHMP.

Exhibit 2. OAHMP and Evaluation Workflow



OAHMP = Older Adults Home Modification Grant Program. OT = occupational therapist. SC = site coordinator.

2.1.3. Home Modifications. Under step 3, grantees and their home modification contractors install home modifications and adaptive equipment[10] in accordance with the OT work order. OTs conduct a followup inspection and issue additional work orders if necessary. Grantees record all home modifications completed and their associated costs that used HUD funding on the **Documentation of Home Modification Work Completed** Microsoft Excel form. Grantees upload it to REDCap.

2.1.4. Followup Evaluation Visits. In step 4, when grantees conduct their in-home post-modification program assessment, they also interview clients on their functional capacity and falls risks, re-administering the Client Program Questionnaire and the Client Impact Evaluation Interview. This allows Solutions to compare baseline and followup data to assess the impact of the home modifications on clients' health and well-being.

2.2. Process Evaluation

While most of the evaluation's impact data are being collected via the forms that Solutions' team designed for grantees to administer during implementation of their OAHMP, step 5 and step 6 are solely for the evaluation.

2.2.1. Grantee Process Evaluation Online Survey. This survey, identified under step 5 of the flowchart, collects grantee feedback on critical OAHMP implementation activities such as recruitment, baseline, program management, work order development, materials procurement, contractor hiring and oversight, and overall satisfaction with the program. Although the survey is predominantly comprised of closed-ended questions, it also includes optional opportunities for grantees to expand on their responses to provide further detail. As originally designed, grantees were to take this survey annually. When the evaluation's data collection period was reduced, Solutions initially planned to administer it toward the end of the collection period. However, with PD&R's approval, Solutions revised this approach to have grantees complete the survey sooner; i.e., before delivery of the interim briefing and report, with the hope that information about the barriers, challenges, adaptations, and even successes encountered by Cohort 1 grantees might help OLHCHH as they onboard FY22 OAHMP grantees (i.e., Cohort 2).

2.2.2. Client Process Survey. Also, during the flowchart's step 5, Solutions' site coordinators (SCs) administer the **Client Process Evaluation Interview** via phone or video conversations with a randomly selected 10 percent subset of OAHMP clients.[11] The survey is administered within 6 to 9 months after home modifications are completed, and according to the client's preferred language (e.g., English or Spanish). The survey asks questions about the client's

[10] HUD OLHCHH defines adaptive equipment as any assistive device or everyday item that enables individuals with functional limitations and special needs to perform activities of daily living to reduce the risk of falling. Referenced items do not require puncturing the floor, walls, or ceiling of the home to install; can be installed by an OT or other individual, i.e., work does not need to be performed by a licensed, bonded, and insured contractor.

[11] Solutions' team biostatistician used a sequential stratified approach to create a separate randomization list of clients to contact for each grantee that has conducted fieldwork. Separate lists help to ensure the geographic, racial/ethnic, gender, and socioeconomic diversity of the selected grantee subset is equivalent to that of the grantees' enrolled population. Each grantee list randomly selects 1 of every 10 sequentially enrolled clients for Solutions' SCs to contact. If a randomly selected client cannot be contacted or declines to participate in the Process Evaluation interview, the SC chooses the next client on the list to ensure the participation goal is met.

impression of the home modifications delivered via the OAHMP and the impact the modifications have had on their ability to remain in their home. The goal of the survey is to assess client satisfaction with HUD's OAHMP and grantees' implementation processes.

2.2.3. Grantee Site Visits. Under step 6, Solutions conducts in-person sites visits with OAHMP grantees. These visits serve three purposes: (1) allow Solutions to informally meet with grantee staff to learn about any barriers and challenges they are encountering in their OAHMP implementation as well as hear about opportunities and successes their organizations has had; (2) ensure grantees are collecting impact evaluation data in accordance with evaluation protocols and provide hands-on data collection technical assistance as needed; and (3) conduct limited in-home client visits to observe grantees' administration of the evaluation's health and home assessments. These visits enable Solutions to conduct indepth discussions with grantee management and staff to assess how OAHMP processes are implemented, identify any potential barriers to implementation, and learn if there are ways the OAHMP might be revised to ensure it accomplishes HUD objectives. When it is possible to attend client assessments, Solutions also has the opportunity to witness first-hand how the grantees interact and work with clients to determine the most appropriate home modifications.

If available, Solutions staff also collect supporting documentation, such as marketing collateral grantees use to promote the OAHMP in their communities, information about their referral network(s), and lists of funding resources used to help leverage their OAHMP grant.

The site visit selection process is not random. In determining which grantees to visit, Solutions considers various components such as grantee location, including region, and whether the grantee is urban or rural; the type or focus of the grantee organization (i.e., do they have a home repair background or medical/health focus); grant allocation; number of clients projected to be served, etc. This approach ensures that the evaluation's process assessment considers various implementation aspects that might factor into grantees' delivery of the OAHMP in their respective communities.

2.2.4. Peer-to-Peer Learning Sessions. Although not captured in the OAHMP and evaluation workflow chart, Solutions is also conducting peer-to-peer sessions with grantee staff based on their program role, e.g., program managers/directors, OT/OTA/CAPS, or home repair specialists. These sessions will facilitate peer learning as well as inform the evaluation about some of the issues grantee staff are encountering as they implement the OAHMP. While Solutions does not create a formal agenda for these sessions, prompting questions are prepared ahead of time to help encourage discussion. These prompting questions are drafted based on questions Solutions received from grantees during the evaluation via e-mail/phone calls, during training sessions, or feedback shared during grantee site visits.

3. Interim Impact Evaluation Results

This section presents quantitative impact evaluation results for data Cohort 1 grantees entered into REDCap up to January 17, 2023, the approximate midpoint of the compressed, 1-year evaluation data collection period (July 2022 through July 2023).[12]

From a qualitative perspective, the report includes feedback and information gathered just prior to the interim briefing presentation (i.e., early March 2023) from completed grantee site visits peer-to-peer sessions, and other opportunities Solutions' team has had to engage grantee staff.

3.1. Status of Impact Evaluation Data Collection as of January 17, 2023

The OAHMP's delayed launch, combined with the OMB review and approval process, has affected Solutions' ability to collect evaluation data. Grantees were unable to routinely collect and enter data for the evaluation into REDCap until mid-July 2022, and some grantees appear to have been slow in launching their OAHMP. Although Solutions attempted to collect early program data from grantees willing to use paper evaluation forms prior to the July launch of REDCap, due to grantee confusion about their need to collect evaluation data, most of the data collected were incomplete, and Solutions was not able to include them in the evaluation dataset. Additionally, although many grantees steadily entered evaluation data once the REDCap platform became available, others have lagged behind, and still others have entered little to no data at all.

Solutions conducts monthly quality control (QC) checks on evaluation data that grantees have entered into REDCap and provides a QC report to each grantee for whom issues are identified. The QC report notes missing and incomplete forms (e.g., home modification documentation) and possible data issues (e.g., home modification date occurs before baseline visit date). Whereas many grantees quickly respond, when feasible, to address the identified issues, others have been relatively unresponsive. Several grantees have entered only minimal client data to date. For example, they have entered client eligibility data but no baseline visit or home modification data. At this midpoint in the evaluation period, lack of home modification and followup data is significantly and adversely affecting the impact evaluation.

During the monthly status call and in the monthly report, Solutions shares information about which grantees have not entered evaluation data into REDCap, as well as about those lagging in their data entry or not responsive to Solutions' QC reports. The HUD government technical representative (GTR) for the OAHMP has access to this information and reminds grantees, both as a group and individually, of the importance of entering evaluation data in a timely manner during every grantee meeting.

3.2. Client Flowchart

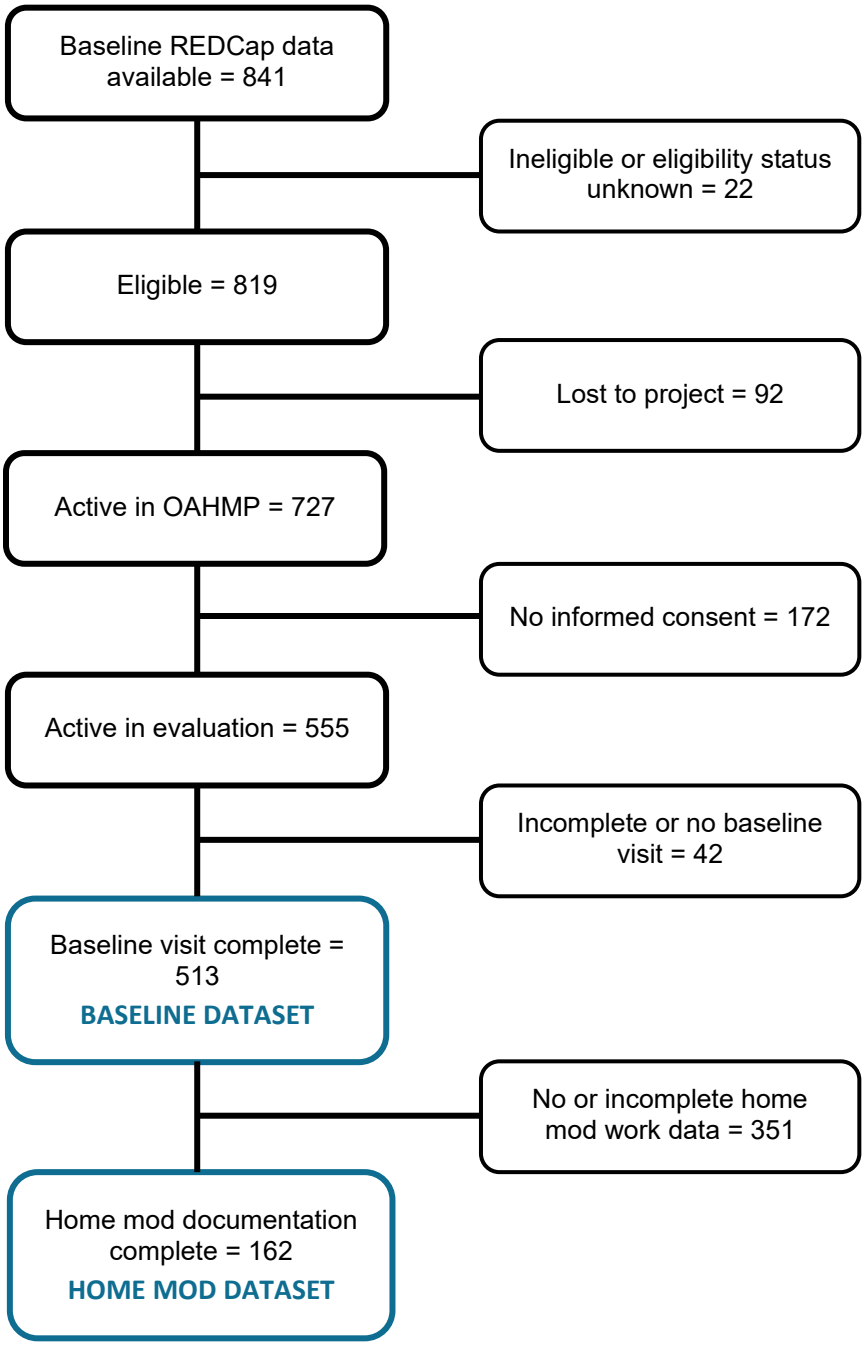
Exhibit 3 illustrates the procedure Solutions used to determine whether data are sufficiently complete for use in the interim report. As of the January 17, 2023, cutoff date Solutions set for interim reporting, grantees had entered data for 841 clients into one or more REDCap forms. Of

[12] PD&R initially anticipated a 36-month data collection period for the OAHMP evaluation.

those, 22 clients (2.5 percent) were either ineligible for the OAHMP, or REDCap contained insufficient data to determine their eligibility. Of the remaining 819 clients, 92 (11 percent) have been lost to the OAHMP and/or the evaluation for a variety of reasons (e.g., they moved, decided not to continue in the evaluation or OAHMP, became ill, or passed away). Of the remaining 727 clients, 172 (24 percent) have not yet been asked to sign (165 clients) or have declined to sign (7 clients) the evaluation informed consent. Of these remaining 555 clients, 42 (7.5 percent) were missing data or had an incomplete set of baseline evaluation forms in REDCap. The remaining 513 clients comprise the interim "baseline" dataset. From this dataset, the home modification data entered into REDCap are either missing or incomplete for 351 clients, to yield a total of 162 clients (32 percent) for whom both complete baseline and home modification data are available. These 162 client records comprise the "home modification" dataset.[13]

[13] There is a data lag for some information. Although client records may be missing data or evaluation forms may not have been complete at the time of this report, data and forms may be completed at a later date. On a monthly basis, Solutions alerts grantees about incomplete data records; most grantees enter missing data and update the forms. Solutions cannot determine which client data, if any, will be missing at the end of the evaluation.

Exhibit 3. OAHMP Evaluation REDCap Baseline Data Flowchart



OAHMP = Older Adults Home Modification Grant Program.

3.3. Baseline Client Demographics

The majority of clients were White (58 percent), female, (79.5 percent) and lived alone (55 percent) (exhibit 4). Over one third (38 percent) identified as Black or African-American, and 4 percent identified as Hispanic, Latino(a), or of Spanish origin. The mean age at program enrollment was 75 years. At the baseline visit, clients had lived in their homes a mean of 30 years (range: less than 1 year to 83 years), and 28 percent lived with two to three other adults 62 years of age or older. Almost all (95 percent) of clients considered remaining in their homes as long as possible to be very or extremely important, and only 4 percent considered this not very or only somewhat important.

At baseline, over one quarter (26 percent) of clients reported their general health as *very good* or *excellent*, 36 percent reported *good*, and 37 percent said *fair* or *poor*. About half of the clients reportedly did not need to use a cane, walker, or wheelchair to help them move around their home or property.

In the year prior to the baseline visit, 40 percent (202 of 510[14]) of the clients reported having had at least one major medical event[15] which required unplanned medical calls or visits. Of those, 54 percent (109 of 202) indicated that they used emergency medical services for their first or second major medical event,[16] and 88 percent (177 of 202) said they visited an ER or urgent care facility because of the first or second event. Nearly one third of these clients (58 of 177) stated that a fall or injury was the reason for their ER or urgent care visit for the first or second medical event; of those 58 clients, 40 said this fall or injury occurred in their home or on their property (69 percent). Sixty percent of those clients (24 of 40) were hospitalized for at least one night.

Exhibit 4. OAHMP Evaluation Client Demographics Summary

Characteristic	N[g]	Result
# (%) Female	513	408 (79.5%)
Mean Age at Enrollment (SD)	513	75 (7.9)
# (%) Clients with Race/Ethnicity of:[a]	513	
White		288 (56%)
Black or African-American		198 (38%)
Hispanic, Latino/a, or Spanish origin[b]		19 (4%)
Several/mixed[c]		16 (3%)
American Indian or Alaska Native		8 (2%)
Other[d]		4 (<1%)
Asian[e]		3 (<1%)
Not answered		8 (2%)
Mean # Years in Current Home (SD)	512	30 (17.6 s.d.)

[14] Clients have the option to refuse to answer, or say they do not know an answer, to any given question. Three people fell into this category.

[15] A major medical event was defined as injuries or illnesses that happen unexpectedly and are serious enough that the client needed immediate, unplanned medical care. Unplanned medical care was defined as calling 911, the fire department, or ambulance services; or visiting an emergency room or urgent care facility.

[16] Cohort 1 collected data for up to two major medical events in the year prior to the baseline visit.

Characteristic	N[g]	Result
# (%) Clients who live:	513	
Alone		283 (55%)
With one other person ≥ 62 years old		144 (28%)
With two other people ≥ 62 years old		5 (1%)
With three other people ≥ 62 years old		3 (0.6%)
With no people ≥ 62 years old or ≥ one other person <62 years old		77 (15%)
Data not provided		3 (0.6%)
# (%) Clients who consider the importance of remaining in home for as long as possible:	512	
Very or extremely important		488 (95.1%)
Not very or somewhat important		19 (3.7%)
Not at all important		1 (0.2%)
Not sure		4 (0.8%)
Not answered		1 (0.2%)
# (%) Clients with general health status:	507	
Excellent or very good		136 (26%)
Good		183 (36%)
Fair or poor		188 (37%)
# (%) Clients who always or frequently use the following to move inside home or property (versus sometimes, rarely, or never):	509	
Wheelchair		30 (6%)
Walker		104 (20%)
Cane		118 (23%)
# (%) Clients who had ≥ one major medical event requiring unplanned medical calls or visits:[f]	510	202 (40%)
# (%) Clients who used emergency medical services for first or second major medical event	202	109 (54%)
# (%) Clients who visited ER or urgent care center for first or second major medical event	202	177 (88%)
# (%) Clients who reported a **fall or injury** was the reason for ER/ urgent care center visit for first or second major medical event	177	58 (33%)
# (%) Clients who reported a **fall or injury in their home or on their property** was the reason for ER/urgent care center visit for first or second major medical event	58	40 (69%)
# (%) Clients who were hospitalized for ≥ one night after falling or being injured in their home or on their property and going to the ER for first or second major medical event	40	24 (60%)

Characteristic	N[g]	Result
ER = emergency room.		
[a]Because clients could choose more than one ethnicity or race, the sum of the numbers in this section exceeds the sample size, and the sum of the percentages exceeds 100.		
[b]"Hispanic, Latino/a, Spanish Origin" includes clients who identified as Mexican, Mexican American, or Chicano/a (5); Puerto Rican (8); or another Hispanic, Latino/a, or Spanish origin (6). No clients identified as Cuban.		
[c]This category includes 16 clients who identified as more than one race or ethnicity: Black/American Indian or Alaska Native (5), Black/Puerto Rican (3), White/Puerto Rican (3), many/mixed (2), another Hispanic/White (1), White/Mexican (1).		
[d]"Other" category includes 4 clients who identified as a race other than those specifically mentioned on the client interview form and includes Guatemalan (1), Dominican (1), Guyanese (1), and human (1).		
[e]"Asian" includes clients who identified as Asian Indian (1), Chinese (1), and Other Asian (1). No clients selected Filipino, Japanese, Korean, or Vietnamese, or Asian race choices.		
[f]Cohort 1 collected data for up to two major medical events in the year prior to the baseline visit.		
[g]Clients have the option to refuse to answer or say they do not know an answer to any given question; therefore, N		

3.4. Baseline Characteristics and Condition of Clients' Homes

Data entered into REDCap indicate that 78 percent of OAHMP clients lived in single-family, detached homes; 15 percent lived in manufactured homes (exhibit 5). Less than 1 percent of clients lived in multifamily housing, likely due to the OAHMP homeownership requirement. Homes varied in their year of construction, with 32 percent built between 1981 and the present, 43 percent between 1941 and 1980, and 25 percent built in 1940 or earlier. Most homes had at least one interior or exterior issue affecting safety or accessibility (59 percent and 72 percent, respectively), with bathroom hazards the most prevalent (91 percent of homes), followed by interior stairs/steps and kitchen hazards (71 percent and 68 percent, respectively). Housing condition data were collected from Home Hazard Checklist forms, which were completed by OTs (62 percent), OTAs (3 percent), CAPS (18 percent), home repair specialists (5 percent), and various other types of personnel (12 percent).

Exhibit 5. OAHMP Evaluation Housing Characteristics and Conditions

Characteristic	N[e]	# (%) of Homes
Type of home/primary residence:	513	
Single-family home, detached		400 (78.0%)
Manufactured or mobile home		75 (14.6%)
Single-family home, attached to any other dwelling		35 (6.8%)
Condominium in multiunit building		2 (0.4%)
Other type		1 (0.2%)
Year of home construction:	417	
Pre-1920		56 (13.4%)
1921–1940		47 (11.3%)
1941–1960		88 (21.1%)
1961–1980		93 (22.3%)
1981–2000		105 (25.2%)
2001–present		28 (6.7%)
Homes with any of the following conditions:		
General interior issues[a]	505	296 (58.6%)
General exterior issues[b]	502	360 (71.7%)

Characteristic	N[e]	# (%) of Homes
Missing/nonfunctioning smoke detectors	511	152 (29.7%)
Missing/nonfunctioning CO alarms	510	155 (30.4%)
Water heater set >120 degrees Fahrenheit	300	8 (2.7%)
Light switch hazards	512	99 (19.3%)
Interior floor hazards	509	252 (49.5%)
Door hazards	505	310 (61.4%)
Interior stair and step hazards[c]	238	169 (71.0%)
Kitchen hazards[c]	495	334 (67.5%)
Bathroom hazards[c]	496	449 (90.5%)
Bedroom hazards[c]	474	151 (31.9%)
Wheelchair-related hazards	44	21 (47.7%)
Accessibility hazards	130	66 (50.8%)
Vision-related hazards	111	53 (47.7%)
Hearing-related hazard	32	13 (40.6%)
Cognition-related hazard[d]	43	9 (20.9%)

CO = carbon monoxide.

[a]General interior issues include missing grab bars or storm windows; boarded-up or broken windows; deteriorated plaster or drywall; difficult-to-use thermostat, washing machine, or dryer; or hardware for window treatments.

[b]General exterior issues include deteriorated foundation, bricks or siding, or roof; slippery or uneven walking surfaces; missing handrails on steps; poorly lit entrance; house number not visible; or difficulty in accessing mailbox.

[c]Includes only stairs and steps, kitchens, bathrooms, and bedrooms to which field staff had access during the visit.

[d]Cognition-related hazard checks included whether the range was missing conductive heating that could prevent burning.

[e]Clients have the option to refuse to answer or say they do not know an answer to any given question; therefore, N for a given question may be less than 513.

3.5. Comparison of Client Demographics and Home Characteristics

Solutions ran a statistical analysis comparing the client demographics and home characteristics of the home modification dataset with those of other homes in the baseline dataset (i.e., non-home modification dataset). Risks associated with multiple comparisons of these data were mitigated by using the Holm–Bonferroni method to control the probability that one or more type I errors will occur (Holm, 1979). One test for select client demographics was conducted, followed by a second test for select home characteristics. The rejection criteria was adjusted for each of the individual hypotheses to achieve an overall alpha of 0.05 for each of the two tests. Neither client demographics nor home characteristics were statistically different after accounting for multiple comparisons (exhibit 6).

3.6. Baseline Status of Clients' Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL) Limitations and Falls Risk

Exhibit 7 summarizes the baseline status of function-related client data, using data from the baseline dataset of 513 clients.

3.6.1. ADL Limitations. On average, clients had difficulties with three of eight ADLs, possibly indicating a stage of life in which people begin to experience more limitations. Almost half (47

percent) of clients reporting difficulties with bathing and showering, 42 percent with grooming, approximately one third with dressing or toileting (34 percent and 31 percent, respectively), and about a quarter each with getting in and out of beds or chairs (24 percent), eating (26 percent), and walking across a small room (25 percent).

Exhibit 6. Comparison of Client Demographics and Home Characteristics

Demographic/Characteristic	Home Modification Dataset		Non-Home Modification Dataset	
	N[a]	# (%) of Clients/ Homes	N[a]	# (%) of Clients/ Homes
Client Demographics				
Female	162	134 (83%)	351	274 (78%)
Race/ethnicity of White or Black	156	154 (99%)	342	317 (93%)
Lives alone	161	83 (52%)	351	200 (57%)
Always or frequently use a wheelchair to move inside home or property	160	11 (7%)	349	19 (5%)
Always or frequently use a cane to move inside home or property	160	39 (24%)	350	65 (19%)
Always or frequently use a walker to move inside home or property	161	44 (27%)	351	74 (21%)
Fall or injury in their home or on their property was the reason for ER/urgent care center visit for first or second major medical event	64	27 (42%)	113	31 (27%)
Hospitalized for ≥ one night after falling or being injured in their home or on their property and going to the ER for first or second major medical event	160	8 (5%)	350	16 (5%)
Home Characteristics				
Single-family detached, manufactured, or mobile home	162	148 (91%)	351	327 (93%)
General interior issues	161	97 (60%)	344	199 (58%)
General exterior issues	157	120 (76%)	345	240 (70%)
Light switch hazards	162	42 (26%)	350	57 (16%)
Interior floor hazards	160	97 (61%)	349	155 (44%)
Door hazards	160	103 (64%)	345	207 (60%)
Interior stair and step hazards	77	61 (79%)	161	108 (67%)
Kitchen hazards	158	117 (74%)	337	217 (64%)
Bathroom hazards	152	139 (91%)	344	310 (90%)
Bedroom hazards	156	58 (37%)	318	93 (29%)

ER = emergency room.

[a]Clients have the option to refuse to answer or say they do not know an answer to any given question; therefore, N for a given question may be less than 162 for the home modification dataset and less than 351 for the non-home modification dataset.

When asked whether they had difficulties with the eight ADLs, 52 percent to 76 percent of clients responded that they had no difficulties and did not need any help. Less than 2 percent (mean 1.6 percent) indicated that they needed help to perform any of the eight ADLs (data not

shown in exhibit). These findings may help explain the relatively low mean ADL score of 3.9, which is closer to 0 (the total independence score) than 16 (the total dependence score).

3.6.2. IADL Limitations. On average, clients had difficulties with three of eight IADLs, with almost 80 percent (79.2 percent) of clients reporting difficulties with managing money; 60–70 percent with traveling independently (70 percent), shopping for personal items (70 percent), taking medications (68 percent), and washing laundry (64 percent); and almost half with preparing meals (58 percent), doing light housework (50 percent), and using the telephone (49 percent).

About two thirds of clients (mean 60 percent) reported they could perform IADLs without help, with less than 4 percent (mean 3.6 percent) saying they "need help regardless of difficulty) to perform IADLs. As with the ADL score, these findings may help explain the relatively low mean IADL score of 4.6, which is closer to 0 (the total independence score) than 16 (the total dependence score).

3.6.3. Falls Risk. More than 40 percent of clients (218 of 503, or 43 percent) reported having at least one fall inside their home or on their property (e.g., in their yard or driveway) in the year leading up to the baseline visit, with an average of two falls per client. The mean falls efficacy score of 39.6 indicates that clients are generally more confident than not confident at all about being able to do various activities without falling but may be starting to lose confidence.

3.6.4. Quality of Life. The mean quality-of-life score, 8.3, is near the midpoint of the range.

Exhibit 7. Baseline Status of Key OAHMP Client Health and Safety Conditions

Health Measure	N[c]	Value
ADL Limitations:[a]		
Mean number (SD) (possible range 0–8)	508	2.9 (2.6)
Mean score (SD) (possible range 0–16)	508	3.9 (3.9)
IADL Limitations:[b]		
Mean number (SD) (possible range 0–8)	497	2.8 (2.6)
Mean score (SD) (possible range 0–16)	497	4.6 (4.8)
# (%) clients with at least one fall inside home in past year	503	218 (43.3%)
Mean # falls inside home or on property in past year (SD)	503	2 (6.3)
Mean Falls Efficacy Score (SD) (possible range 10–100)	496	39.6 (27.6)
Mean Quality of Life Score (SD) (possible range 5–15)	507	8.3 (2.0)

ADL = activities of daily living. IADL = instrumental activities of daily living.

[a]Client difficulties with eight ADLs: bathing/showering, dressing upper body, dressing lower body, getting in and out of bed or chairs, eating, toileting, walking across small room, and grooming.

[b]Client difficulties with eight IADLs: preparing meals, doing light housework, shopping for personal items, using the telephone, washing laundry, traveling independently, taking medications, and managing money.

[c]Clients have the option to refuse to answer or say they do not know an answer to any given question; therefore, N for a given question may be less than 513.

3.7. Summary of Home Modifications and Adaptive Equipment

The **Documentation of Home Modifications Completed** form contains more than 140 home modification items and more than 40 adaptive equipment items from which grantees could choose when summarizing work they completed in each client's home. For reporting purposes, Solutions grouped these items into 16 home modification categories and 14 adaptive equipment categories. Appendix B provides a full list of item choices within each of these categories.

3.7.1. Time Periods and Cost of Home Modifications. Of the 162 homes with complete home modification data available, 75 percent (126) were single-family homes, and 21 percent (34) were manufactured/mobile homes (exhibit 8). Grantees reported an average of 51 days between the baseline visit and the beginning of home modifications (range immediate post-baseline to 286 days). Completion of home modifications per home took an average of 15 days (range: 1–143 days). The mean combined per-home cost of home modifications and adaptive equipment was $2,751, about half the OAHMP cap of $5,000 (range: $483–$13,718).

Exhibit 8. Time Periods for and Costs of OAHMP Home Modifications

	N	Range	Mean	Median
# Days from baseline visit to home mod start[a]	162	0–286	51	35
# Days for home modifications[b]	162	0–143	15	6
Per-home cost of work:				
Home modifications	162	$270–$12,078	$2,689	$2,227
Adaptive equipment	21	$12–$5,300	$480	$197
Total	162	$483–$13,718	$2,751	$2,360

[a]Baseline visit is based on the date the client program questionnaire was completed.

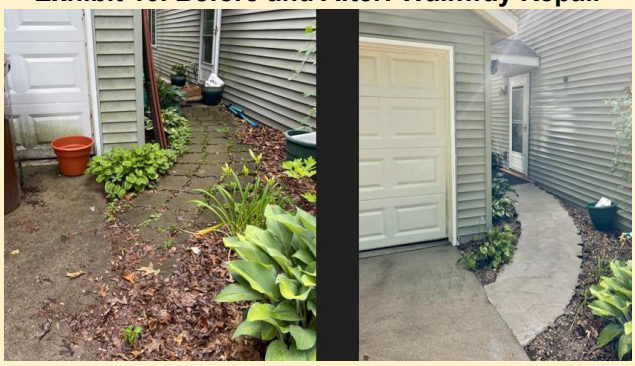
[b]Days from reported home modification start date to the later of either the initial home modification end date or the end date of additional home modification work.

3.7.2. Common Home Modifications. Grantees reported bathroom-related tasks (e.g., toilet repairs, tub cuts, replacement of standard-height toilets with comfort-height toilets) were the most common home modifications, done in 67 percent (108/160) of homes (exhibit 9). General fall prevention, non-grab bar, was the second most common home modification category, which included installation, repair, or replacement of handrails, railings, and banisters; pressure-mounted super-poles, nonskid materials on exterior or interior stairs or

Exhibit 9. Bathroom: Comfort Height Toilet and Shower Chair

A higher toilet and shower chair are installed to help client stay safe in the bathroom. Photo credit: Lake Cumberland Area Development District

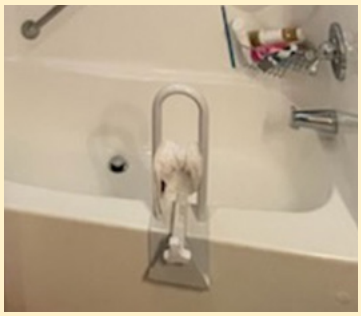
Exhibit 10. Before and After: Walkway Repair



Installed a safer client walkway. Photo credit: Disability Advocates of Kent County

steps; and threshold or room transitions. Grab bars were also a frequent home modification category, done in almost 60 percent of homes (94 of 160). Miscellaneous home repairs,[17] performed in 42 percent of homes (68 of 160), included installation, repair, or replacement of gutters or downspouts; non-bathroom, non-kitchen faucet handles; hallway; porch or deck, not including railings; roof; walls or ceilings; windows; non-kitchen shelving or cabinetry; or other items not included in any other home modification category. The least frequent categories of home modifications named were those related to the laundry (<1 percent); exterior pathways, walkways, or driveways (6 percent); floors (14 percent); and the heating, ventilation, and air-conditioning (HVAC) or plumbing system (15 percent).

Exhibit 11. Adaptive Equipment: Movable Bath Assist Rail



Installation of a rail to help client get in and out of the bath. Photo credit: Disability Advocates of Kent County

3.7.3. Common Adaptive Equipment. Not surprisingly, given the nature of the OAHMP, grantees tended to install home modifications rather than adaptive equipment in homes. Grantees reported that "large" bathroom fall prevention equipment[18] (64 percent, or 14 of 22 homes in which adaptive equipment was provided) and safe mobility/transfer equipment[19] (27 percent, or 6 of 22 homes in which adaptive equipment was provided) were the most frequent types of adaptive equipment utilized by grantees (see exhibit 12).

Exhibit 12. Summary of Most Common Home Modifications Completed in OAHMP Client Homes[a]

Home Modification Category[b]	# (%) Single-Family Homes, Attached and Detached N=126	# (%) Manufactured/ Mobile Homes N=34	# (%) All Homes N=160
Accessibility item	24 (19%)	9 (26%)	33 (21%)
Bathroom	**84 (67%)**	**24 (71%)**	**108 (68%)**
Electrical feature	30 (24%)	5 (15%)	35 (22%)
Exterior doors	57 (45%)	8 (24%)	65 (41%)
Floors	17 (14%)	6 (18%)	23 (14%)
General fall prevention, non-grab bar	**88 (70%)**	14 (41%)	**102 (64%)**
Grab bars	**72 (57%)**	**22 (65%)**	**94 (59%)**
Home safety devices	55 (44%)	11 (32%)	66 (41%)
HVAC or plumbing system	22 (18%)	2 (6%)	24 (15%)
Interior doors	27 (21%)	3 (9%)	30 (19%)
Kitchen	28 (22%)	7 (21%)	35 (22%)
Laundry	1 (<1%)	0 (0%)	1 (<1%)
Lighting	66 (52%)	8 (24%)	74 (46%)

[17] Please note, grantees had the option of providing photos of their home modifications to the Evaluation. As of the interim report, DAKC was one of the few grantees that had provided "before" and "after" photos.

[18] Adaptive equipment grantees provided from the "Bathroom Fall Prevention, Large" category included toilet risers with handles, tub transfer benches, shower chairs, and folding bedside commodes.

[19] Adaptive equipment items grantees provided from the "Safe Mobility/Transfer Equipment" category included bed assist rails and walker or wheelchair accessories.

Home Modification Category[b]	# (%) Single-Family Homes, Attached and Detached N=126	# (%) Manufactured/ Mobile Homes N=34	# (%) All Homes N=160
Miscellaneous home repairs	57 (45%)	11 (32%)	68 (42%)
Pathways, walkways, or driveways	6 (5%)	4 (12%)	10 (6%)
Temporary resident relocation	1 (<1%)	0 (0%)	1 (<1%)

HVAC = heating, ventilation, and air-conditioning.
[a]Bolded items are those home modification tasks performed in more than half of homes.
[b]See appendix B for lists of item choices included in each home modification category.

Exhibit 13 outlines the most common adaptive equipment OAHMP grantees provided to clients.

Exhibit 13. Summary of Most Common Adaptive Equipment Provided to OAHMP Clients[a]

Adaptive Equipment Category[b]	# (%) Clients in Single-Family Homes, Detached and Attached	# (%) Clients in Manufactured/ Mobile Homes	# (%) All Clients
N	19	3	22
Bathroom fall prevention, large	**12 (63%)**	**2 (67%)**	**14 (64%)**
Bathroom fall prevention, small	2 (11%)	1 (33%)	3 (14%)
Declutter/home organization items	0 (0%)	**2 (67%)**	2 (9%)
General fall prevention, non-grab bar	1 (5%)	1 (33%)	2 (9%)
Other IADL aids	1 (5%)	0 (0%)	1 (5%)
Personal care items	3 (16%)	1 (33%)	4 (18%)
Safe mobility/transfer equipment	5 (26%)	1 (33%)	6 (27%)
Vision-related items	0 (0%)	1 (33%)	1 (5%)

IADL = instrumental activity of daily living.
[a]Bolded items are those adaptive equipment categories installed in more than half of homes.
[b]See appendix B for a list of item choices included in each adaptive equipment category.

4. Process Evaluation

Whereas the impact evaluation relies primarily on quantitative data collected by grantees about their clients' health and home environment, the process evaluation relies on qualitative input obtained from grantee staff and clients as to how the program is working and what it is achieving. This section summarizes feedback and information gathered up to March 2023.[20] These interim process findings stem from discussions with grantees during (1) four grantee site visits, (2) the grantee process survey, (3) one peer-to-peer session with OT/OTA/CAPS staff, (4) monthly evaluation "office" hours that began in January 2023, and (5) grantee training sessions.

Four site visits have been completed to date: two in urban communities and two in rural. Two grantees who were visited focus on individuals with disabilities; one focuses on older adult home

[20] Due to the lack of home modification completion dates for most clients, Solutions is just beginning to conduct client process surveys, and no client input informed this report. Although this interim report contains only grantee process evaluation data, the final report will include both grantee and client process evaluation data.

repair, and another focuses on healthcare. One of the site visits included a prime grantee implementing the OAHMP in one community, with a subrecipient implementing their own OAHMP in another location 2 hours away, each with their own CAPS staff. Because one remote OT oversees the work of both organizations, Solutions identified the grantee as a single grantee (versus a prime grantee with separate subgrantees).

Thirty-four of the 47 grantees provided input on OAHMP processes and their experiences to date. Of note, responses shared by the three administrative grantees were distinctly different than those from grantees responsible for implementing the OAHMP in their communities.

Some of the qualitative process evaluation findings may stem from miscommunication and/or grantees' understanding of the OAHMP requirements based on their own program focus, particularly in relation to "allowable" home modifications. For example, after talking with grantees, Solutions discovered that their program focus/background (e.g., health care versus home repair) might play a role in how they were implementing the OAHMP because of how they perceived program goals. When feasible, Solutions will attempt to distinguish between program issues or barriers possibly originating from miscommunications or misunderstandings of a few grantees versus issues many grantees commonly identified or expressed.

4.1. Program Administration

4.1.1. Rollout. While acknowledging that OAHMP is a new program and some delays in its launch were to be expected, several grantees expressed concerns about how the program was rolled out and how the related delays have impacted their ability to launch and implement their respective programs, some of which are described as follows:

- Numerous grantees indicated that the delays negatively impacted the staffing of their program, including their ability to recruit new staff, particularly the OAHMP-required OTs. Some grantees said they lost staff while waiting for the release of OAHMP funding.
- A few grantees mentioned that they found OLHCHH's Healthy Homes Grants Management System (HHGMS) unwieldly, making it difficult to enter required data, and that it sometimes restricted approval for items allowed under the Notice of Funding Opportunity (NOFO).
- Some grantees expressed concerns about HUD-promised training that was never received, specifically training to help them income-qualify clients.

Approximately 15 months after the fiscal year 2021 (FY21) OAHMP rollout, Solutions believes that the cited rollout issues are mostly in the program's rearview mirror, and at least one grantee indicated that the situation has greatly improved over the past 6 months. However, recognizing and understanding these issues may provide OLHCHH insight for future OAHMP grantee cohorts.

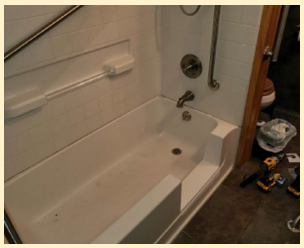
4.1.2. OAHMP Funding Cap. One issue consistently relayed to the evaluation team was that the program cap of $5,000 is much too low and is hindering grantees' ability to successfully deliver the level of service that clients need. In many cases, the cap limits what the grantee is able to provide to the client because the modifications needed would exceed $5,000. Most of the respondents of the Grantee Process Evaluation Online Survey specifically noted this problem, as did each of the four grantees with whom Solutions has conducted a site visit. Specific issues identified in relation to the cap include the following:

Exhibit 14. Before and After: Access Ramp with Walker Steps

Stairs were extended and more secure railings added to ensure client safety. Photo credit: Disability Advocates of Kent County

- ***Service Limitation***. The cap severely limits grantees' ability to complete home modifications in both the interior and exterior of the client homes. Choices are directed by clients, but options are often limited by budgetary constraints. For example, if a client needs an access ramp or substantial walkway repairs to safely access their home, there is insufficient funding for interior safety modifications. Grantees indicated they struggle to determine which modifications would most benefit the client, and they often feel as though a choice must be arbitrarily made between vital repairs.
- ***Confusing Guidance.*** Grantees have reported a considerable amount of confusion about how OAHMP funding can be used, even with the guidelines provided in the NOFO, particularly appendix B, "Home Modifications/Repairs."[21] During the OAHMP's early days, grantees (usually OT staff) often asked Solutions why a specific modification was prohibited (ramps were commonly cited). While Solutions always directed grantees to contact their OLHCHH Government Technical Representative (GTR) for clarification, in followup with OLHCHH, referenced items were often found to be allowable. Solutions later determined that some of the grantee staff confusion around allowable home modifications could actually be based on an individual grantee's policy and protocols, not HUD's. In some instances, Solutions found that grantee program directors and managers made strategic programmatic decisions not to offer some types of modifications to ensure sufficient funding to potentially provide a greater number of other measures.

Exhibit 15. Tub Cut



A tub cut to enable safer access to tub. Photo credit: Disability Advocates of Kent County

[21] The NOFO discussed home modification selection and appendix B in sections I.A.1, III.F.11.b, III.F.18, III.F.26, and VI.B.15.b, and instructed grantees to focus on items listed in the "Maintenance" column, not the "Rehabilitation" column, of appendix B.

Other grantees indicated that if an item was not expressly listed in appendix B, it could not be employed in the modification of a client's home, even though the appendix table indicates that the lists are "examples" of allowable modifications.

- ***Exceeding the Cap***. Several grantees indicated they were informed, in meetings with OLHCHH, that they should "walk away" from projects costing more than $5,000. The understanding they shared with Solutions was that if their assessment indicated the cost would exceed the OAHMP cap, they should not attempt any modifications in the home.

  Conversely, a couple of grantees thought OLHCHH was amenable to approving projects assessed over the cap amount as long as the grantee provided clear justification(s) for why the modifications were needed, and they could balance high costs for one client with lower costs for another (i.e., employ a portfolio approach in which, if the grantee spent $7,000 in one home, they might only spend $3,000 in another), with the condition that their overall spending did not exceed their grant allocation or reduce the number of projected projects negotiated with HUD for their OAHMP grant.

- ***Leveraging Additional Resources***. Although some OAHMP grantees indicated they have been able to leverage OAHMP funding to bring additional resources to a client's home modification project, others indicated they could not or chose not to for a variety of reasons, including—

  - Concerns that spending more than $5,000 would trigger an automatic environmental review, even if only $1 of OAHMP funding was used in the project.
  - Inability to obtain HUD approval for projects that exceeded the $5,000 program cap, even if other funding resources were available and would be used to fill the gap between the allowable $5,000 cost per home and total project cost.
  - Lack of alternative resources. One grantee who applied to the OAHMP to expand their reach to rural counties was unable to find any rural funding resources to supplement their OAHMP work. In the urban areas in which they also work, they had been able to access Community Development Block Grant (CDBG) program funding and resources from their city/local jurisdiction; but those resources were not available in the rural areas, and their research and outreach had not uncovered any additional rural funding resources for home modifications. This dilemma potentially exacerbates the impact of the $5,000 cap in areas where alternative funding is not readily available and may constrain the availability of services in these geographic areas.

- ***Skyrocketing Costs.*** Both material and labor costs have surged since the FY21 OAHMP NOFO was released, have continued to rise since grantees launched their programs in early 2022, and are predicted to continue to increase throughout the OAHMP grant period (ABC, 2023; Addison, 2022; Shemish, 2022). One grantee indicated that, although they could have easily installed a walk-in shower for $5,000 or less 4 or 5 years ago, they have increasingly turned to "tub cuts" instead, because they report that material and labor costs to replace a tub with a walk-in shower are now prohibitively high. Grantees also indicated that their contractors are still dealing with lingering supply chain issues from the COVID-

19 pandemic as well as from severe skilled-labor shortages, especially in rural communities. All of these factors are contributing to the increased cost of home modifications.

Given the current state of construction and labor costs, many grantees indicated that they would like to reduce the number of projects they deliver under their OAHMP grant and be allowed to spend more per home.

4.1.3. Environmental Review. Grantees shared many issues and complaints about HUD's required environmental review process. It is difficult to determine whether these issues are specific either to the OAHMP or the review process in general, or whether they are simply related to a misunderstanding of when a review is required for a given project and who is permitted to conduct it.

Some grantees seem confused about what prompts an environmental review, and grantees identified a range of potential conditions, including (1) any project over $5,000, (2) whether the soil around the home was at all disturbed, or (3) only if the soil is disturbed by a certain level (without a specification of what the "level" would be). One grantee reported not receiving approval to replace a client's concrete front steps and sidewalk because of "environmental" issues but did not, or perhaps could not, provide details about the issue.

A few grantees also appear confused as to what entity may conduct the review, i.e., must it be done by HUD, or can it be provided by a local jurisdiction? Additionally, if the local jurisdiction is allowed to conduct the environmental review, grantees are unclear whether or what HUD supplemental review or signoff is needed.

Several grantees indicated that HUD's environmental review process and related documentation is overly intensive and time consuming, with grantees reporting that some reviews have substantially delayed the construction process. One grantee cited an example in which the environmental review cost them 6 months, and, in the process, they also lost the contractor hired for the project. Other grantees indicated that clients became disheartened with the process and withdrew from the program.

A few grantees—with access to other funding resources—stated that they decided not to use the OAHMP funding for some projects because they anticipated that the environmental review process and approval timeline would be too costly.

4.1.4. Beneficiary Eligibility Criteria. Grantees shared several issues related to helping applicants meet the OAHMP eligibility criteria, especially grantees who are integrating the OAHMP with existing programs. A few grantees mentioned that their current clients do not qualify for the OAHMP because they do not meet the age threshold (62 years) or own their homes.

- ***Homeowner Requirement.*** The homeownership requirement is particularly vexing for some grantees, because they reported having applicants who previously owned and are still living their home; but for a variety of reasons (e.g., for tax purposes or to ensure the home remains in the family), the applicant had switched the deed to an adult child with

whom they live. Another challenge cited—specifically for grantees trying to serve older adults on tribal lands—is when the tribe is the actual property owner. Although the client is a member of the tribe, the individual applicant does not hold a clear or clean homeowner title.

- ***Documentation.*** Tracking down required homeowner documentation is also a major hurdle for some grantees, especially in rural areas. One grantee indicated that they help applicants access their social security records online to document income eligibility and have even, with the client's permission, sifted through files and mail to find necessary documents (e.g., deeds, mortgages, and social security letters). This grantee also noted that older adults, especially those who do not drive or have access to a computer, find it extremely difficult to acquire documents needed to provide proof of eligibility.
    - Another grantee indicated that the documentation issue has become so problematic that they revised their flyers and program announcements to list explicitly the type of documents applicants need to provide.
    - One subgrantee stated that tracking down property tax records and mortgage payment documents to ensure that clients were current on their property taxes and mortgage was extremely time-consuming. It was unclear whether it was a HUD requirement or a policy their prime grantee had adopted.

4.2. Program Implementation

Grantees also identified several challenges they have encountered as they implement the OAHMP in their communities. In addition to the specific issues outlined in this section, a few grantees shared that increasing costs across all sectors are inhibiting their ability to deliver the OAHMP as originally planned. In some cases, it appears they did not adequately account for rising costs in the budget they negotiated with OLHCHH, which is now limiting their marketing and outreach efforts, ability to adequately train staff, and even their capacity to identify referrals for critical client or home needs beyond the OAHMP scope.

4.2.1. Staffing Issues. In addition to staffing issues caused by delays in the program rollout, several grantees reported experiencing high staff turnover due to the tight labor market (Ferguson, 2023), which has also led to issues related to the need for more staff training.

- ***Staffing OTs.*** Numerous grantees shared that they have had difficulties recruiting and/or keeping OTs on staff. This difficulty has been especially true for grantees new to using an OT as part of their home modification program; it also seems more common among grantees with a home repair/upgrade focus. One grantee mentioned that the OT company with whom they contracted for services is also suffering from a shortage of OTs. Quite a few grantees reported deciding (or having) to shift gears from contracting with a local OT to working with a remote OT—sometimes in a completely different state and time zone.
- ***Staffing Approvals.*** Several grantees mentioned problems with the HUD approval process for staff changes. A few shared that approvals from other agencies (e.g., the U.S. Department of Health and Human Services) generally occur within 48 hours, but it is not

uncommon to wait 2 or more months for HUD approval. One project director stated that she had been locked out of HUD's electronic Line of Credit Control System (eLOCCS) for several months because she could not get a new program manager approved, and the system required that both she and the program manager sign off on completed projects before they could receive HUD approval for payment/project reimbursement.

- ***Training.*** Grantees also reported problems with inadequate funding to train new staff in the event of staff turnover. New staff must be trained in not only the grantee's own internal protocols and procedures but also those specific to HUD and the OAHMP (e.g., HHGMS and eLOCCS). Grantees state they often lack funds for new staff to obtain credentials such as CAPS, which the evaluation team was told was required for program management (this appears to be a specific program policy/requirement, not a HUD requirement).

4.2.2. Home Contractor Availability. Finding contractors for the OAHMP modifications is a major issue. Almost every grantee reported having difficulties finding contractors, and several indicated that trying to obtain multiple bids for a single project is nearly impossible. Whereas most grantees attribute the problem to the overall lack of skilled tradespeople and a tight job market, several identified the funding cap as the issue because most licensed and insured contractors are not even willing to bid on projects under $5,000.

One grantee stated that it might be easier to find a "handyman" for some of their OAHMP work, but they could not use a handyman because—in their state—individuals who work on projects under $5,000 do not need to be licensed or insured. Based on the grantee's interpretation of the NOFO, "handymen" in their state would not meet OAHMP requirements. The NOFO states that "…all modifications must be performed by a licensed contractor, *or in accordance with your local and state regulations"* (emphasis added by Solutions).[22] It is unclear as to whether the emphasized caveat would allow for a handyman to be used for the OAHMP work, but the grantee did not believe it would.

Although finding a skilled contractor appears to be an issue for nearly every grantee, rural grantees report having a particularly difficult time due to the added travel time it takes contractors to reach clients. One grantee had to offer potential contractors incentives such as gift cards or restaurant certificates to even show up at a home to bid on a job.

4.2.3. Client Recruitment. Most grantees have reported few or no issues recruiting older adults to the program because they either already had a waiting list or were building their list while they waited for the program to roll out. Many grantees indicated that word-of-mouth referrals from the community had provided more clients than they could serve.

Grantees who did cite recruitment issues, however, often attributed them specifically to the reason they had applied for OAHMP funding in the first place, such as broadening their reach. For example, a couple of grantees who primarily work in urban areas sought OAHMP funding to

[22] The full OAHMP NOFO may be found in HUD's archive at https://www.hud.gov/program_offices/spm/gmomgmt/grantsinfo/fundingopps/oahmp.

serve older adults in the rural counties around them because there was clearly a need. Whereas they had no difficulty reaching older adult homeowners in their urban community, marketing and outreach needed in the rural areas proved more difficult, requiring much more time and effort than anticipated. The grantees reported working with their rural counties' area agencies on aging (AAAs) but noted that formal referral services in rural areas are often lacking. In the rural communities, word-of-mouth referrals again seemed to be one of the most effective recruitment tools.

Grantees in communities with a high number of immigrants or immigration issues have also reported some recruitment difficulties. In some cases, they indicated that older adults rarely apply for these types of programs because they are accustomed to relying on family for help, even when the help may not be forthcoming. A few grantees also speculated that some older adults in these communities are hesitant to apply for a program that might draw attention to them, even if they are U.S. citizens. Grantees say that the potential client worries that having repairs on their home could bring too much attention to them and put them at risk, either from local authorities or other community members.

4.2.4. Referral Process and Networks. Grantees report that some of the homes they inspect need much more work than can be addressed by the OAHMP. In some cases, the work is beyond the scope of the OAHMP; in others, there is not enough funding to address all the issues in the home. Although a handful of grantees report having extensive resources with whom they can work to ensure that the client's needs are met or to whom they can refer the client, others are sometimes at a loss as to how to adequately help their clients. This issue seems especially acute in rural areas where there are few resources and/or funding for home repair services.

Another issue grantees grapple with is the time and effort needed to identify and work with other service providers. Grantees who sought OAHMP funding to expand their reach must often start by identifying new potential partners and/or creating a network of service providers to whom they can refer clients. Even grantees with established referral networks report that the time it takes to coordinate services with partners is underestimated, and related costs are not adequately covered.

4.2.5. Communication. Grantees reported a few different levels of communication disconnects. For example, in some instances, grantees indicated that the OAHMP would not allow a modification or adaptive equipment they wanted to implement (ramps being a common example); however, it appears the issue may not stem from what is allowed for OAHMP but rather what the grantee's management may allow due to the item's cost or amount of time and/or effort that the particular item might entail.

Another potential communication gap appears to be between prime grantees and subgrantees. Grantees report that HUD only works directly with the prime grantee. Consequently, subgrantees do not participate in the onboarding process or routine HUD calls; instead, they must rely on the prime grantee to relay program information to them. Unfortunately, it appears that this type of communication may resemble a game of "telephone," in which the information the prime grantee shares with the subgrantee may not be the same as the information shared by HUD staff. Since

the subgrantee has no direct connection with OLHCHH staff, they have no mechanism to confirm or clarify confusing guidance. In some cases, it appears that a protocol or process that the prime grantee told the subgrantee they must follow may be the prime's internal practice or policy, not a HUD requirement.

4.2.6. PD&R Evaluation. Grantees provided substantial feedback on how the evaluation impacted their ability to implement the OAHMP. Many grantees indicated that they felt the evaluation process and workload was confusing, which is not surprising given the changes made to the evaluation during the onboarding and program launch stages.

One issue grantees expressed particular frustration about was being unaware that they could use some evaluation forms for their program purposes. Several grantees indicated that, because the NOFO specifically required OAHMP grantees to employ "standard" forms, they had researched and, in some cases, purchased forms or systems to specifically meet the requirement. When later presented with the evaluation forms, they thought they had to duplicate their efforts, entering data on both their "standard" forms and in REDCap. Even though Solutions indicated that evaluation forms could be used for program purposes during trainings, grantees shared that they were not aware that OLHCHH recognized the forms as "standard" forms that met the program's requirement.

Additionally, although Solutions reduced the evaluation burden on grantees (see the "Methodology" section), a few grantees indicated that the client often became fatigued by the length and repetition of the client health and home assessments.

Some grantees shared their displeasure with having to enter data into REDCap, indicating the process of helping OT staff and contractors download the REDCap mobile app and enter client data into the system cost too much time and money. Interestingly, after getting accustomed to using REDCap, other grantees who initially complained about having to use it subsequently asked whether they could continue using REDCap once Cohort 1's evaluation data collection period ends. They reported appreciating how easy it was to use REDCap and the information the evaluation forms collected.[23]

4.3. Successes and Opportunities

Grantees freely discussed program issues during Solutions' data gathering processes, and they were excited to share opportunities that their programs had discovered or were now able to offer because of the OAHMP. They also shared some of the successes that the program's funding is providing to their local communities.

4.3.1. Serving More Clients. Every grantee Solutions spoke with shared their excitement about the ability to use OAHMP funding to serve more clients, saying it was a major reason they applied for the funding.

4.3.2. Broader Reach. Several grantees indicated that the OAHMP not only enables them to serve more clients, it also allows them to serve clients in locations they could not previously reach, including neighboring, often rural counties, which tend not to have many home modification resources.

4.3.3. New Ideas and Approach. Although Solutions often heard that adding an OT to their programs was challenging for some grantees, numerous grantees shared that working with an OT enhanced their services and ability to "think outside the box," providing them new ideas and approaches to helping their clients. One example a grantee shared—which they indicated they would not have thought to do without their OT—was to replace the door of a very small bathroom with a heavy curtain. This allowed the grantee enough room to install

Building Independence

"Mac" is a older adult with a disability living alone in a rural mobile home, with no family nor friends to depend on. The county Area Agency for Aging introduced him to the OAHMP grantee.

Mac unenthusiastically agreed to a grantee visit. Clearly depressed and a little despondent, he shared he'd left his home only twice in the past year and subsisted on cereal. With OAHMP funding, the grantee addressed critical fall hazards such as fixing a hole in the shower floor and installing a handheld shower and handrails. They also helped Mac with skills like how to use his phone to keep track of doctor appointments and how to maintain important paperwork. Local volunteers helped the grantee address other hazards not covered by HUD funding. Partnering with area service agencies, the grantee helped Mac get ongoing support such as Meals on Wheels and Life Alert.

Boots by the door. Photo credit: Bing Creative Commons.

The next time they visited, the grantee noticed Mac had clearly improved his grooming—he'd showered and combed his hair—definitely not the disheveled guy they initially met. And Mac's cowboy boots were right by the front door!

The changes in his home and the connections he'd made to support services gave Mac the confidence to attend church, become more engaged in his community, and even go shopping for Christmas gifts.

[23] Solutions agreed to leave REDCap portal available to Cohort 1 OAHMP grantees who wished to use it for the duration of their OAHMP performance period.

grab bars and a comfort-height toilet in the small space and still provide the client privacy.

Additionally, although the focus of most of the home modifications implemented via the OAHMP are "standard" safety measures, such as installing comfort-height toilets and grab bars, grantees were excited to talk about incorporating innovative items into their home modifications, such as bidets, which can help older adults maintain better hygiene.

4.3.4. Client Focus. Although all grantees would likely indicate that their programs are "client-focused," many shared that they were excited to increase their understanding of client needs and incorporate more client input. Most grantees indicated that specific OAHMP requirements, as well as the questions asked via the OAHMP evaluation, helped them improve their ability to target client needs and more fully engage their clients in home modifications decisions.

4.4. Grantee Recommendations

4.4.1. Increase the Program Cap. Several grantees suggested that the OAHMP spending cap be increased to focus on "quality over quantity." As noted, although some grantees are able to supplement their home modification projects with funding from other sources, not all grantees have access to alternative resources. Grantees often feel as though they are unable to provide their clients with much-needed services or, sometimes, even adequate referrals.

4.4.2. Revisit the Environmental Review Process. As previously mentioned, there appears to be confusion about when an environmental review is required, and grantees would like the process clearly laid out and perhaps streamlined, if possible. Grantees specifically suggested that HUD should allow local jurisdictions to perform the environmental reviews. Whereas at least one grantee indicated this is their current practice (i.e., they submit environmental reviews conducted by their local entity to HUD for approval), other grantees indicated that they were required to submit environmental paperwork to HUD, who conducted the review.

4.4.3. Expand the Pool of Acceptable Assessors. A few grantees shared that they were relieved when HUD expanded the list of acceptable client and home assessors beyond licensed OTs and OTAs to add CAPS to the list. However, at least one grantee suggested that HUD should also allow other certified/licensed practitioners, such as Certified Environmental Access Consultants (CEAC), in addition to CAPS.[24]

4.4.4. Improve and Expand Training. A few grantees indicated that they would like more HUD training—for all their staff, not just management. A few subgrantees shared that they would appreciate being allowed/invited to participate in HUD trainings.

4.4.5. Improve Communication. Several grantees expressed frustration with the communication and guidance they have received about what is (and is not) allowed by the program, especially when the guidance seemed to be exceptions and/or changes. These grantees would like better communication with HUD and to see more items clearly documented in a format they can easily

[24] While CEACs may not receive the same level of training as an OT, the grantee believed their training was more extensive than that of a CAPS. It seems several services for independent living (SIL) organizations received an OAHMP FY21 award, and they commonly employ CEAC professionals for assessments.

access and use as a reference tool as needed. This suggestion came from both OTs as well as from program management, most commonly in reference to not understanding an allowable home modification as well as to when they can or should request eLOCCS draw-downs or reimbursements for completed home modification work.

- ***Frequently Asked Questions.*** A specific communication suggestion that several grantees provided is for HUD to post, and update as needed, an OAHMP "frequently asked questions" (FAQ) sheet. A few grantees mentioned that although HUD posts regularly updated FAQs during the proposal process to address questions and respond to concerns, they recommended that it would be helpful if a FAQ list were maintained for the program itself as an easy reference tool. Feedback from HUD staff suggests that grantees also benefit from periodic reminders of existing tools.

5. Discussion of Evaluation Findings

5.1. Impact Data Collection

One major component of the evaluation is an assessment of the long-term costs and benefits of the OAHMP home modifications to older adults. However, Solutions' ability to collect post-modification data to evaluate the impact of OAHMP modifications has been severely hampered by HUD-requested changes to the grantees' followup data collection process. Another factor that is impacting Solutions' ability to acquire enough data to adequately address the evaluation's objectives is the compressed data collection period of 12 months. As indicated, Solutions will continue conducting client process survey and grantee site visits through September 2023, which should provide adequate qualitative process feedback, but Solutions must depend on grantees entering data into REDCap to conduct a quantitative impact analysis. Solutions is concerned the data, especially followup data, will not be adequate to provide a strong analysis of the OAHMP impact on clients' functions and health.

5.2. Client Baseline Health and Function

At the interim briefing, some attendees noted that the mean baseline client health data appear to indicate that many clients may be on the verge of needing home modifications. This finding may indicate that grantees are intervening in homes before clients need to depend fully on the adaptive equipment or home modifications. Grantees also anecdotally mentioned that they thought clients gave themselves relatively high ratings for general health, even though grantees observed the clients visibly struggling with various issues. Intervening at a point when older adults are just starting to worry about aging and falling is a far better preventive measure and is likely to generate a large return on investment over time. Because of the way the evaluation collects and analyzes data, intervening before clients have begun experiencing substantial function challenges may make it more difficult to discern impacts on client health and function.

5.3. Followup Health and Function Data

Grantee delays in documenting completed home modification have substantially limited Solutions' ability to conduct followup interviews with clients. Although both OLHCHH and

Solutions have worked with grantees to support and increase evaluation data entry, as of mid-January 2023 (the data cut-off for this report), evaluation records indicated relatively few clients were eligible for the post-modification followup calls or eligible for the random selection for client process surveys.

Because lack of followup data will inhibit Solutions' ability to fully evaluate the OAHMP impact on client health and function, a mandate stipulated in the congressional JES, Solutions has begun exploring alternative means to collect essential followup data with PD&R and OLHCHH. Feedback received from the March 23 interim briefing further highlighted the need to determine a viable approach to collect and report followup data. One approach under consideration, even if it does not result in long-term data at the scale originally intended, is to ask OAHMP grantees to collect followup evaluation data during their program's routine HUD-required post-home modification assessment and inspection. Unfortunately, collecting these followup data soon after home modifications have been installed may not provide sufficient time for the home modifications to have had an impact on clients' function and falls. For example, the evaluation may not be able to tie any ADL or IADL score changes (either positive or negative) to the home modifications. However, the benefit to the grantees is that they would be allowed to use the evaluation's followup forms to comply with the OLHCHH requirement that immediate in-person visits be documented. Once a plan is approved and followup data are collected, Solutions will compare baseline and followup data to assess the short-term impact of the modifications on clients' health and home hazards.

5.4. Home Modification Tasks and Costs

Most of the work (both home modifications and adaptive equipment) in client homes was related to the bathroom. This finding matches those of research studies such as Moreland et al. (2020), which found that the bathroom was one of the most common indoor home locations for older adult falls (bedrooms and stairs were the other most common locations).

As mentioned earlier in this report, HUD requested that Solutions reduce the level of detail grantees needed to provide on the home modification work documentation forms. Accordingly, Cohort 1 grantees were trained to document only OAHMP-funded tasks. Given the high maximum reported home modification cost of $13,718 (for combined home modifications and adaptive equipment), it appears that some grantees are recording all tasks (and associated costs) conducted in a home, regardless of whether the funding was from OAHMP or other sources. Anecdotal reports from grantees corroborate this; however, other grantees informed Solutions that they have been careful not to include any work associated with other funding sources, even if extensive work was attributable to these sources. Grantees have been reminded to record only OAHMP-related costs and, in the final report, Solutions will include a comparative analysis between interim report cost data and final report cost data to determine if there is a significant change.

Collection of only OAHMP-funded tasks and costs could make it more difficult to interpret impact and process evaluation findings or accurately document the true cost of implementing the program. Additionally, the inconsistent reporting of tasks and costs may make it difficult to attribute positive health impacts solely to OAHMP. As referenced in the "Process Evaluation"

section, although some grantees have additional resources to supplement their OAHMP funding, others spend a considerable amount of time and effort struggling to locate additional resources needed to address client needs, particularly in rural areas. Given the reduced scope of the Cohort 1 home modification data, Solutions will not be able to determine possible differential impacts of these various grantee approaches on both health and the program implementation or describe the full cost of implementing this type of program.

"Miscellaneous home repairs" were some of the more frequent categories of home modifications done. As shown in appendix A, this category was designed to delineate home repair work related to structural and other work indirectly or tangentially related to client fall prevention work tasks. Upon closer investigation, Solutions discovered that while grantees did appropriately use this category to list work only indirectly related to client function (e.g., painting a bathroom, removing construction-generated waste from the site, fencing and gate repairs, roof work, gutter and downspout repair), they also misplaced items directly related to client function and mobility here (e.g., grab bars, toilets, accessibility items). As a result of this investigation, Solutions recategorized over 250 items.

As noted earlier in this report, some grantees used the home modification documentation work form to record all tasks performed in a home, not just work paid for with OAHMP funding. Some of these tasks (e.g., roof work) may go beyond the "low barrier" type of home modifications addressing ADLs and IADLs, as mandated by Congress. It is unclear whether these types of home modifications were performed using funding sources other than OAHMP funding. In addition, although Solutions trained grantees to list labor, materials, and subcontractor costs for each task done in a home, grantees reported that they had only aggregated costs; consequently, it was not possible to use costs to identify whether individual tasks exceeded the OAHMP $5,000 cap (possibly indicating they were paid using other funding).

5.5. Administrative Grantees and Subgrantees

As previously noted, OLHCHH issued 32 OAHMP grants in FY21; 3 grantees are administering grants with subrecipients, but the grantees themselves are not implementing the OAHMP with clients. Additionally, although OLHCHH is only collecting HHGMS data from the 32 prime grantees, the evaluation is collecting data from the full contingent of grantees, which hopefully will provide insight as to the benefits and/or drawbacks associated with having an administrative grantee managing numerous implementing grantees in various locations/regions.

In addition to these three administrative-only grantees, another prime grantee is both implementing an OAHMP in their community as well as administering the grant with a subgrantee 2 hours away who is implementing the OAHMP in their own community. The evaluation opted to consider them a single grantee because they are sharing an OT; in retrospect, given that two completely different programs are being implemented, that might not have been the best approach for the evaluation. Fortunately, Solutions was able to meet both the prime grantee and their subgrantee to collect feedback on the potential implication of this type of prime/subgrantee arrangement.

For administrative grantees and their subgrantees, training for both OAHMP program requirements and evaluation protocols may have been insufficient. When the OAHMP first began, OLHCHH noted that it took several grantees considerable time to fill project director and project manager positions. Additionally, as grantees experience turnover among these positions, training remains an ongoing need during program implementation. Although Solutions recorded all their evaluation training, it is unclear whether grantees have actually used them to train new personnel or subgrantees. Grantee management personnel may not fully understand the need for field staff, particularly subgrantee staff, to attend most if not all HUD program and Solutions' evaluation trainings. If the intent is for the prime grantee to share HUD information with their subgrantees, it is unlikely the prime grantees can provide the same level of training as that offered by HUD or Solutions.

5.6. Utilizing OTs

It is not completely clear whether all the grantees are complying with the OAHMP OT requirement or using OTs according to program guidelines, although 83 percent of home hazard checklists were completed by an OT (62 percent), OTA (3 percent), or CAPS (18 percent).[25] On at least one occasion, when asked about their OT/OTA/CAPS, Solutions was met with a response akin to, "What is an OT/OTA/CAPS?" Several grantees do have CAPS on staff, and—as referenced earlier—there are some grantees who require their program managers to have the CAPS credential at a minimum. As noted, several grantees have opted to work with remote OTs to comply with the OAHMP requirement that a licensed OT oversee the work of an OTA or CAPS, and at least three grantees in very different parts of the country are utilizing the services of the same remote OT. In some instances, such as in some rural areas, this decision may have been made due to a lack of locally available OTs; in others, it may have been made out of convenience (i.e., it was easier to contract with a remote OT than work with a local OT to oversee their projects). While this may meet program requirements, it may not entirely meet the intent of having an OT as part of the program. Staff of one grantee working with a remote OT expressed concerns about the OT's ability to provide accurate guidance if they were not able to visually assess the client and/or client's home. Concerns were also raised about OTs who, unfamiliar with the local climate, recommended inappropriate modifications given local conditions.

5.7. Program Costs

Delays cost money. Grantees consistently reminded the evaluation team that the delayed program launch was not as simple as postponing their program implementation: they often must hire staff in advance of initiating their program locally and ensure that staff members have proper credentials or provide/obtain the training needed to acquire the credential; and the hiring process itself is intensive and time-consuming. When/if programs and funding are delayed, grantees often lose staff and/or the ability to hire and train staff. These are not costs grantees can recoup.

[25] The remaining 17 percent of home hazard checklists were completed by home repair specialists or various other personnel.

5.8. Working in Rural Communities

HUD required half of the OAHMP grantees to work in rural locations, and several grantees with extensive experience in older adult home modifications and broad referral networks received funding to work in these areas; however, there appear to be limited resources to supplement their OAHMP efforts in these communities. In some cases, it may be because the grantee, although experienced, is new to working in rural communities; in others, it is the general limited availability of programs to serve the older adult population in rural communities. Either circumstance may inhibit grantees' ability to adequately implement the OAHMP in these communities where the need for services is still significant.

5.9. Home Modification Work Preapprovals

There appears to be some uncertainty as to how and when grantees should attempt to leverage additional funding with the OAHMP grant funding. The NOFO is explicit about the $5,000 per home program-level cap to implement low-cost, low-barrier modifications to help older adult clients remain safely in their homes. It is also clear that grantees must have preapproval prior to exceeding the OAHMP funding cap. However, it is apparently not clear to grantees when or whether they must request HUD preapproval to spend more than $5,000 if they are utilizing a non-OAHMP funding source to supplement their work in an older adult's home.

5.10. Partners and Referral Networks

Many of the grantees seem to have very extensive partner and referral networks, and it appears that the programmatic focus of a grantee plays a key role in the type of referral processes and networks they employ and/or have available to their program. For example, a healthcare-focused organization may be familiar with a myriad of health and human facilities to which they can refer clients, such as community health and nutritional services, but they may not be aware of or have a relationship with organizations (such as community action agencies) who often run the local weatherization programs; alternatively, grantees with a home repair background may be familiar with and can connect to services available via the weatherization programs, but they may not have public health partners who can provide additional health and well-being supports, such as Meals on Wheels, that older adults might need to remain independent in their homes. Grantees may need support learning about additional types of resources, such as CDBG funding or social service agencies that could supplement their OAHMP work.

The evaluation's process findings also document some of the common challenges and barriers that grantees communicated about their experience working with partners and referral networks to implement the OAHMP in their community. In some instances, the findings highlight general difficulties grantees have shared in identifying additional resources and working with partners to provide needed services and help older adults access critical needs beyond the capacity of the program. For example, OAHMP funding provides grantees entry into the homes of older adults, which may present the grantee an opportunity to observe additional client needs, from housing repair to mental health issues and food insecurity, beyond the scope and capacity of OAHMP funding. As the grantee has witnessed the need, they often feel obligated, at a minimum, to help

the older adult determine and access resources that can aid their ability to remain safely in their home.

Additionally, even experienced grantees take different approaches to working with other service providers. In some cases, grantees simply refer the client elsewhere, which is the least expensive and fastest tactic. Others, perhaps recognizing the limited ability of their older adult clients, try to arrange and coordinate additional care on behalf of the client. Grantees who attempt to coordinate additional work for clients have acknowledged that, while frequently needed, this additional effort stretches their own limited organizational capacity and budgets and, from an overall standpoint, impacts their ability to adequately implement the OAHMP.

Potential "Best" Practice: One grantee explained that it is rare for them to refer clients to a partner organization if they do not have the funding or capacity to implement a needed modification; instead, they may employ referral protocols, as follows:

1. They may provide their client the contact information for a specific individual with a partner organization. Grantee staff follows up with the partner organization to alert them of the issues in the client's home that need to be addressed and ensure that the client has reached out to the partner for assistance.
2. They coordinate the client's needs and work directly with the partner. The grantee outlines the work that needs to be accomplished, identifies what measures they themselves can implement with their programs and grant funding, and then they work with the partner(s) to determine which service the partner organization(s) can provide. In addition to coordinating funding and available services, the grantee also often coordinates the actual delivery of services with partners to reduce the stress of having multiple contractors enter the client's home at various times.

5.11. Communication

As indicated, there are several areas where grantees expressed confusion or potential misunderstanding about components of the OAHMP. This confusion highlights an opportunity to ensure that all grantees, both prime and subrecipients, are aware of any available FAQs posted by HUD. Although there is no guarantee that grantee staff will access and read these documents, it ensures consistent and standard responses regardless of who is asking or responding to a question.

6. Conclusions

Impact evaluation baseline results indicate the OAHMP is reaching both older adults currently in need of home modifications to help them remain independent, as well as those who are just starting to be concerned about aging and falling but who have fairly good mobility and physical function. Bathroom-related home modifications and adaptive equipment were the most frequently reported types of work performed in client homes.

Program launch delays had a considerably negative impact on data collection, which was further compounded by OAHMP grantee confusion about the NOFO requirement to participate in the

evaluation. Additionally, although both the role of the OT/OTA/CAPS and participation in the evaluation was clearly identified in the FY21 OAHMP NOFO, a few grantees were apparently unaware that OT/OTA/CAPS were required, and almost no grantees allocated adequate time and/or funding for their participation in the evaluation. Whereas many grantees have begun to enter evaluation data routinely during their program implementation, there are still a significant number of grantees who either do not enter data in a timely manner—or at all.

7. Additional Observations

In addition to data and information collected through the impact and process evaluations, Solutions has documented additional observations that may improve future OAHMP implementation and evaluation.

7.1. Evaluation

7.1.1. Timing of the Client Process Surveys. As previously indicated, Solutions' staff conduct the Client Process Survey with randomly selected OAHMP clients 6 to 9 months after their home modifications have been completed. Although only a few surveys have been performed to date, Solutions has learned that after 6 months some clients may have forgotten details about their home modifications. Such clients may need to be prompted about what modifications were made to their homes, and they may not remember the circumstances that led to the modifications. While this made it more difficult to gather their feedback about program processes, it may indicate that they have seamlessly adapted to the modifications and built them into their daily activities. Similar to the followup health and function interviews, the 6-month post-modification timing of the client process survey was designed to allow OAHMP clients adequate time to live with and adjust to their home modifications; however, if this issue remains a concern as additional interviews are conducted, Solutions and PD&R may want to reconsider the timing. Unlike the followup evaluation interviews that are attempting to measure the impact of the home modifications on the health and well-being of clients, the client process survey is attempting to gather their impressions of the program and how it served them. If they do not recall how they heard about the program, why they were interested in having home modifications made in the first place, or other key issues about the process, such as how they engaged with the grantee and program, the evaluation may not receive the type of input needed to make informed conclusions.

7.2. Program

7.2.1. "Established in the Field." The NOFO required all OAHMP applicants to detail how they were "established in the field," but the idea and HUD acceptance of being "established in the field" seems to vary. It appears that at least a few grantees either had specific staff experienced in the field or they had previously partnered with another organization doing this type of work, but the organization itself may not have necessarily been "established in the field." In some cases, grantees were awarded OAHMP funding to launch an entirely new type of aging-in-place program for their organization.

7.2.2. Additional Training Needs. As referenced in several places throughout the process evaluation findings, there appears to be some confusion between how grantees are trying to

implement the program in their communities and the objectives and goals of the OAHMP. Some grantees do not seem to recognize the limited capacity of the OAHMP to address higher-cost repairs and the program's specific focus on low-cost, low-barrier home modifications, suggesting that there is a greater need for HUD to provide more indepth training for all staff working on this new program, from program management to field staff, including OT/OTA/CAPS and home repair specialists, to help them identify and prioritize home hazards and related low-cost modifications that can help older adults remain in their homes safely. As HUD awarded funding to several grantees working with subrecipients to implement the program in various locations, it appears beneficial for subrecipient staff to participate in such trainings as well.

There are few home repair programs that work with a licensed OT to identify and prioritize modifications to address home hazards. Although HUD requires each grantee implementing the OAHMP have an OT, OTA, or CAPS who is overseen by a licensed OT to conduct the client and home assessment, they may not have provided OTs with adequate training to help them work in a "new way," i.e., conducting hazard assessments within home environments and working with clients to identify specific hazards that could be mitigated with low-cost home repairs. Other programs that utilize OTs in this manner, such as the Johns Hopkins CAPABLE® program, provide OTs with extensive training prior to them working with clients.

7.2.3. OAHMP Ombudsman. Since Solutions provided a contact information in case OAHMP clients had questions about participating in the evaluation, several clients contacted Solutions and National Center for Healthy Housing (NCHH) staff; the calls were most often about the status of the client's home modification, not about the evaluation. In returning the calls, Solutions often learned about situations or client concerns. Whereas evaluation staff always referred the client to their specific grantee, or in a few rare cases to the OAHMP Government Technical Representative (GTR), there were occasions in which an unbiased resource for clients to speak with might have been an appropriate choice had there been such an option—for the evaluation team or the client. Clients may not always be pleased with work performed in their homes, but it might be difficult for the grantee or the program GTR to determine the best way to handle the circumstances, and an OAHMP ombudsman could potentially resolve any disputes or issues that arise from a neutral perspective because they are not invested in the program.

7.2.4. Mental Health and Other Crisis Training. As a HUD-funded program, the OAHMP takes grantees into older adults' homes, and there are times grantees may be faced with a client who is clearly suffering a mental health crisis, from a minor bout of depression or serious hoarding to suicidal thoughts, or experiencing other adverse events (e.g., a heart attack, domestic violence, food insecurity). While it may be assumed OT/OTA/CAPS staff have the training needed to address these issues or know how and where to refer these clients to the best resources, HUD may also want to consider offering OAHMP grantees, who work directly with older adults in their homes, access to resources or specialized training for grantees to assist clients experiencing a crisis effectively, ethically, and equitably.

8. Next Steps

Cohort 1 grantees will collect evaluation data through the end of July 2023, and Solutions will continue working with the grantees and OLHCHH to encourage data entry in a timelier manner in the hope that there will be adequate data to provide a clear outcomes report by the end of the data collection period.

Solutions will conduct two more peer-to-peer sessions in the next few months, one for home hazard assessors/repair staff and the other for program management staff. It is hoped these peer-to-peer sessions will not only provide insights to enhance the process evaluation but also facilitate learning and sharing among the grantees. Additionally, Solutions will continue grantee site visits through September 2023. Three trips with six grantees are currently in the planning stage, and Solutions is on schedule to complete a minimum of 10 grantee site visits. In addition to the three trips being planned, the evaluation team hopes to meet with grantees in at least two more states to ensure adequate regional coverage.

Solutions will attempt to use both the peer-to-peer sessions and grantee site visits, along with other grantee discussion opportunities, to clarify any major differences identified between HUD and grantees' understanding and/or perceptions of program activities and issues.

As of the evaluation's midway point and data collection for this interim report, Solutions had not completed any client process survey interviews. Because more grantees are now entering home modification dates into REDCap, Solutions will use those dates to schedule calls with clients, with the goal of having at least 10 percent of randomly selected clients participate in the interviews.

Solutions is on track to deliver its final briefing to relay evaluation findings and outcomes in January 2024, with delivery of its final report in March 2024. With only a few months remaining in the data collection period, Solutions is cautiously optimistic that grantees will provide sufficient followup data to allow Solutions to adequately evaluate the short-term impact of the OAHMP on client health and function.

Appendix A: Summary of OAHMP Evaluation Data Collection Forms

Form	Components	Data Storage Method	When	Who Fills Out Form
Client Eligibility Documentation Form	Preferred language, age, name, address, phone number(s), e-mail address.[a]	REDCap	Before baseline visit	Grantees, for all eligible clients
Client Program Questionnaire	ADL Difficulties Determination;[b,c] IADL Difficulties Determination;[d] Falls Efficacy Scale;[e] Falls in the Past Year.	REDCap	Baseline and followup	Grantees, for all eligible clients
Home Hazard Checklist (adapted from CDC *Check for Safety, A Home Fall Prevention Checklist for Older Adults*,[f] CPSC "Safety for Older Consumers – Home Safety Checklist,"[g] HUD PD&R *Accessibility of America's Housing Stock: Analysis of the 2011 American Housing Survey*,[h] Rebuilding Together *Safe at Home Checklist*,[i] HUD NOFO appendix B, "Home Modifications/Repairs."[j]	General dwelling (interior and exterior); Home safety devices inside home; Floors inside home; Entrance doors and doors inside home; Stairs and steps inside home; Kitchen; Bathroom(s); Bedroom; Accessibility; Vision, hearing, and cognitive issues.[k]	REDCap	Baseline and followup	Grantees, for homes of all eligible clients
Informed Consent	Evaluation summary, risks, alternatives, potential benefits, costs, compensation, project staff payment, injury compensation, privacy protection, evaluation contact info., statement of consent, signatures of client and person explaining consent.	Scanned copy uploaded to REDCap	Baseline	Grantee with both grantee and client signatures
Client Impact Evaluation Interview	Informed consent, sociodemographic questions (Baseline only), health and unplanned healthcare use for up to two unplanned major medical events, EuroQOL ED-5D™ (quality of life),[l] Medicare HOS ADLs,[m] Medicare HOS IADLs.[m]	REDCap	Baseline and followup	Grantees, for all clients who signed Informed Consent
Home Modification Work Completed Documentation	Work start and completion dates, spreadsheet to document work tasks completed and costs.	Excel file uploaded to REDCap	W/in ~1 month of home mod completion	Grantees, for all clients who received home modifications

Form	Components	Data Storage Method	When	Who Fills Out Form
Lost-to-Project Form	Date and reason(s) client was lost to project.	REDCap	Within approx. 1 week of loss of client	Grantees, for each client lost to OAHMP and/or evaluation
Grantee Process Evaluation Online Survey	Reason(s) for OAHMP grant application; adaptations, changes, or deviations from HUD Program Services Model; recruitment methods; program continuation plan; story/anecdote about experience(s) with OAHMP (optional).	REDCap	Once, near end of Cohort 1 data collection period	One grantee representative from each of 32 grantees and each of 15 subgrantees
Grantee Site Visit Interview Guide	General questions to informally guide conversation.	Notes on encrypted server	Once, during site visits	Solutions PM and ≥2 grantee reps from 10 sites
Client Process Evaluation Interview	How client heard about OAHMP, reasons client applied to OAHMP, why client does or does not feel it's important to stay in their home as long as possible, opinions about their experience with grantee's program implementation, grantee's referral to other services, other client comments (optional).	REDCap	Once, 6 to 9 months after home mod completion	Solutions SCs conduct interviews and enter data for 10 percent of the clients from 32 grantees (i.e., approx. 500 clients)

ADL = activity of daily living. CDC = Centers for Disease Control and Prevention. CPSC = Consumer Product Safety Commission. HOS = Health Outcomes Survey. IADL= instrumental activity of daily living. NOFO = Notice of Funding Opportunity. OAHMP = Older Adults Home Modification Grant Program. PD&R = Office of Policy Development and Research. PM = project manager. SC = site coordinator.

[a]Name, address, and contact information included for Solutions' SCs to conduct client process evaluation interviews via phone or in person.

[b]Gill et al. (2002).

[c]Katz et al. (1963).

[d]Lawton and Brody (1969).

[e]Tinetti, Richman, and Powell (1990). The Tinetti Falls Efficacy Scales asks how confident an individual is doing activities without falling: bathing/showering, reaching into cabinets or closets, walking around house, preparing meals that do not require carrying heavy or hot objects, getting in and out of bed or chairs, answering door or telephone, and getting dressed and undressed.

[f]U.S. Centers for Disease Control and Prevention (2015).

[g]U.S. Consumer Product Safety Commission (2015).

[h]HUD PD&R (2015).

[i]Rebuilding Together (n.d.).

[j]HUD OLHCHH (2021).

[k]Hearing and vision issues in the form use terminology found in the National Center for Disability and Journalism Style Guide (https://ncdj.org/wp-content/uploads/2018/10/NCDJ-styleguide-2018.pdf), American Speech-Language-Hearing Association (ASHA) speech and language disorders webpage (https://www.asha.org/public/speech/disorders/), and ASHA adult speech and language disorders webpage

Form	Components	Data Storage Method	When	Who Fills Out Form
(https://www.asha.org/public/speech/disorders/adultsandl/) . Vision-related hazards included whether (1) electrical and light switches were missing tactile cues; (2) stairs or changes in surface were missing visual or tactile cues; and (3) thermal controls were missing digital displays with large font, backlit features. Hearing-related included whether safety devices were missing visual cues and doorbell used bells instead of flashing lights. Cognition-related included whether the range was missing conductive heating that could prevent burning. [l]Rabin and de Charro (2001). [m]National Committee for Quality Assurance (2020).				

Appendix B: Home Modification and Adaptive Equipment

Classifications, Categories, and Items

This table was created using categories and item choices provided in dropdown lists in the evaluation **Documentation of Work Completed** Excel form grantees submit. Categories and item choices in the lists were adapted from appendix B of the HUD Notice of Funding Opportunity (NOFO) (HUD OLHCHH, 2021). The item choices are not equivalent to the items that grantees selected but are instead the possible choices included in the spreadsheet. If they could not find a home mod or adaptive equipment item they provided in a client home (e.g., painting), grantees could list it in the "Other" category.

Exhibit 16. Items Listed in Evaluation Documentation of Work Completed Dropdown Lists

Classification	Category	Item Choices
Home Modifications	Accessibility Item	Graded ground ramp, modular ramp, permanent ramp, stairlift, wheelchair lift, other
	Bathroom	Bathroom fan, bathroom faucet, faucet handles, mirror/cabinet/shelving, mirror/cabinet/shelving hardware, pedestal/wall-hung sink, sink with legs or cabinets, toilet regular height, toilet comfort height, toilet safety frame or rails, toilet paper dispenser, toilet riser with handles, toilet safety frame or rails, towel rack, walk-in tub or shower, non-walk-in tub, non-walk-in shower, nonslip strips, other
	Electrical Feature	Electrical panel/fuse box, electrical service, home wiring, light switch, GFCI outlet, non-GFCI outlet, other
	Exterior Doors	Door, manual opening, door, automatic opening, hands-free hold open, handle, lock, slide latch or chain, security technology, hinges/opening/swing, peephole, storm/screen door, windowpane, other
	Floors	Uncarpeted, carpeted
	Grab Bars	Grab bars
	Home Safety Devices	Smoke alarm, CO detector, combination smoke/CO detector, fire extinguisher, fire suppression system, Other
	HVAC or Plumbing System	Thermostat, furnace and blower motor, combustion chamber, burner, heat exchanger, evaporator coil, condensing unit or compressor, refrigerant lines, ductwork, return and supply registers, vents, pipes and fittings, hot water heater, air filter, other
	Interior Doors	Door, manual opening, door, automatic opening, hands-free hold-open, handle, lock, slide latch or chain, security technology, hinges/opening/swing, peephole

Classification	Category	Item Choices
	General Fall Prevention, Non-Grab Bar	Handrail, railing, banister, other, pressure-mounted superpole, exterior stairs or steps, interior stairs or steps, nonskid strips/antislip tape on stairs or steps, nonskid rugs/mats/carpet on stairs or steps, colored tape/paint on stairs or steps, slippery surfaces, threshold or room transition
	Kitchen	Automatic appliance shutoff device, cabinets/shelves, cabinet hardware, faucet, faucet handles, work surface/countertops, refrigerator, stove, oven, range, microwave oven
	Laundry	Washer, dryer, other
	Lighting	Floor lamp, lightbulb, nightlight, remote control light switch, motion sensor wall light, fixture, other
	Miscellaneous Home Repairs	Faucet handles non-bathroom or kitchen, gutters or downspouts, hallway, porch or deck not including railings, roof, walls or ceilings, windows, Other, non-kitchen shelving or cabinetry
	Other	Open-ended category where grantees could enter items that were not provided in any of the other categories or item choice lists
	Pathways, Walkways, or Driveways	Pathway or walkway, driveway, antislip tape/non-skid strips, colored tape/paint
	Temp Resident Relocation	NA
Adaptive Equipment	Bathroom Fall Prevention: Large	Toilet riser with handles, toilet riser without handles, tub transfer bench, shower chair, folding bedside commode
	Bathroom Fall Prevention: Small	Nonslip mat or rug, shower caddy
	Declutter/Home Organization Items	Movable shelves or storage
	General Fall Prevention, Non-Grab Bar	Fall detection device, reacher or grabber, step stool
	Hearing-Related Items	Hearing aids
	Other IADL Aids	Lap desk, long-handled eating utensils, adaptive house cleaning equipment, long-handled broom and dustpan
	Pain Reduction Items	Heating pad
	Personal Care Items	Button hooks, compression socks, dressing stick, hip/knee replacement kit, long-handled comb or brush, long-handled shoehorns, long-handled sponge, long-handled toilet aid, sock aid, zipper pull, elastic shoelaces, leg straps, wearable call button, fan, movable shelves, or storage
	Safe Mobility/Transfer Equipment	Bed assist rail, cane, car transfer handle, walker, walker or wheelchair accessories, wheelchair
	Sleep-Related Items	Bed wedge pillow, earplugs, window shades or curtains
	Speech-Related items	Speech-generating devices

Classification	Category	Item Choices
	Vision-Related Items	Magnifying glass
	Other	Open-ended category where grantees could enter items that were not provided elsewhere on the adaptive equipment item choice lists

CO = carbon monoxide. GFCI = ground fault circuit interrupter. HVAC = heating, ventilation, and air-conditioning. IADL = instrumental activity of daily living. NA = not applicable.

Appendix C: Program Services Model (2021)

The minimum requirements of the services to be provided by the grantee are as follows:

a. All services are voluntary for the beneficiary. Consent of the client or legal guardian is required before delivery of services. Grantees are strongly encouraged to work with the client to complete all phases of the program model; however, the client or legal guardian may opt out at any time.

b. The home modifications and other services must be designed to improve general safety, improve accessibility, and improve functional abilities of the client to make tasks easier, reduce accidents and the risk of falls, and lengthen the amount of time the client can continue to safely live in their primary residence.

c. The Program Services Model shall include the following components:

   i. ***Initial and in-home assessment conducted by a licensed occupational therapist (OT), or by a licensed OT assistant (OTA) or certified aging-in-place specialist (CAPS) whose work under the grant is overseen by a licensed OT***. The OT will conduct the initial interview with the client and care takers (if available) in their home and assess the home for safety and hazards, including the client's fall risk, and/or the client's functional abilities with activities of daily living (ADLs) and instrumental activities of daily living (IADLs).

   ii. ***Work order by the OT, or a licensed OTA or CAPS whose work under the grant is overseen by a licensed OT***. With the client's consent, the OT will prioritize the necessary home modifications and complete a work order and any additional specifications (e.g., placing tape on walls to indicate position of grab bars).

   iii. ***Home work***. The work must be performed by a licensed, or in accordance with local and state regulations, contractor qualified to perform the required work.

   iv. ***Followup assessment and inspection***. The OT will conduct an in-home followup assessment, accompanied by appropriate education and training for the client in the safe and proper use of adaptive equipment. The OT will also inspect the work of the repair person to ensure that it meets the requirements and complete a work order for any required adjustments.

d. At least one standardized assessment tool shall be used to collect information before and after the home modification intervention. At a minimum, the assessment tool(s) shall cover the functional abilities of the client and/or the safety and hazards in the home (note: HUD will contract for the evaluation of this program, and grantees may be required to use one or more standard assessment tools as part of the evaluation process).

e. The program services shall not be a replacement of home care visits ordered by a provider for a person with specific rehabilitative or skilled nursing needs, such as followup from a hospitalization, inpatient rehabilitation, or other acute or skilled post-discharge need. If an applicant wishes not to use the Program Services Model described above, the applicant must provide a justification to deviations to the model described above, clearly provide a detailed

overview of the model they intend to use, and document the validation of why their proposed model is better for its program than the Program Services Model, along with the step-by-step process for accomplishment of the performance goals of all components described in paragraphs c.i. – iv. above. If a grant is awarded, acceptance of the deviations will be at the discretion of HUD.

Appendix D: Glossary

Selected Abbreviations, Acronyms, and Terms

Exhibit 17. Selected Abbreviations and Acronyms

Abbreviation or Acronym	Name
ADLs	Activities of daily living
AMI	Area median income
CAPS	Certified Aging-in-Place Specialist
CMS	Center for Medicare and Medicaid Services
eLOCCS	Electronic Line of Credit Control System
ER	Emergency room
HHGMS	Healthy Homes Grants Management System
HIPAA	Health Insurance Portability and Accountability Act
HUD	U.S. Department of Housing and Urban Development
IADLs	Instrumental activities of daily living
Medicare HOS	Medicare Health Outcomes Survey
NCHH	National Center for Healthy Housing
NOFO	Notice of Funding Opportunity
OAHMP	HUD's Older Adults Home Modification Grant Program
OLHCHH	HUD's Office of Lead Hazard Control and Healthy Homes
OMB	Office of Management and Budget
OT/OTA	Occupational therapist/occupational therapy assistant
PD&R	HUD's Office of Policy Development and Research
PM	Project manager
RD/DCAP	Research design/data collection and analysis plan, also known as "protocols"
REDCap	Research Electronic Data Capture
SC	Site coordinator

Exhibit 18. Selected Terms

Term	Definition
Adaptive equipment	Any assistive device or everyday item that enables individuals with functional limitations and special needs to perform activities of daily living to reduce the risk of falling. References items that do not require puncturing the floor, walls, or ceiling of the home to install; can be installed by an OT or other individual, i.e., work does not need to be performed by a licensed, bonded, and insured maintenance/repair person.
Activities of daily living	For purposes of this evaluation: eight activities essential to daily self-care: (1) walking across a small room, (2) bathing, (3) upper body dressing, (4) lower body dressing, (5) eating, (6) using the toilet, (7) transferring in and out of bed/chair, and (8) grooming.
Certified Aging-in-Place Specialist	A designated program that teaches the technical, business management, and customer service skills essential to completing home modifications for the aging-in-place segment of the residential remodeling industry. CAPS are trained in the unique

Term	Definition
	needs of the older adult population and about aging-in-place home modifications, i.e., remodeling projects and solutions to overcome common barriers. The credential is offered through the National Association of Home Builders.
Client	The individual receiving direct services from the grantee (may also be known as the beneficiary). Clients must be older adult, low-income residents of the primary residence where home modifications will be implemented, i.e., at least 62 years of age with a household income less than or equal to 80 percent of the local area median income (AMI) (HUD PD&R, 2020b). OAHMP grantees must have a process for determining beneficiary/client eligibility, including a process to identify which person will be designated as the client if more than one resident in a home meets program eligibility criteria. The licensed OT or licensed OTA/CAPS, whose work is overseen by a licensed OT, will identify the client in each home.
eLOCCS	HUD's primary grant disbursement system for most programs.
Evaluation followup visit	In-home visits conducted by grantees to collect post-home modification impact evaluation data.
Followup assessment and inspection	Conducted by in-home visit OTs soon after home modifications are complete to educate and train the client in the safe and proper use of adaptive equipment. OTs also inspect home repair work to ensure it meets all requirements and/or completes a work order for any needed adjustments.
Home modification	For evaluation purposes, a holistic approach to assisting low-income older adults "age in place" by supporting their ability to live independently. The process includes an in-home assessment; identification and prioritization of changes to the home environment necessary to make tasks easier and reduce accidents; professional installation and implementation of solutions, including adding special features or removing home hazards; and followup visits and evaluation.
Initial visit	Baseline in-home visit conducted by OTs/OTAs/CAPS to interview the client and assess the home for safety hazards, including the client's fall risk, and/or the client's functional abilities with ADLs and IADLs.
Instrumental activities of daily living	For evaluation purposes, eight independent living skills: (1) using a telephone, (2) shopping, (3) preparing food, (4) light housekeeping, (5) washing laundry, (6) traveling independently, (7) taking medications independently, and (8) managing finances independently.
Intervention	Home modification services provided to a client with a certain defined scope and time period as determined by the OAHMP grantee.
Low income	Income does not exceed 80 percent of the area median income (AMI), as determined by HUD.
Manufactured home	A structure, transportable in one or more sections, having the characteristics specified in 24 CFR3280.2 Definitions (https://www.ecfr.gov/cgi-bin/retrieveECFR?n=se24.5.3280_12).
Mobile home	Home built in a manufacturing plant prior to June 15, 1976, or an informal term referring to a dwelling structure built on a steel chassis and fitted with wheels that is intended to be hauled to a

Term	Definition
	usually permanent site but not necessarily conforming to the HUD Code nor a state or local code.
Occupational therapist/ occupational therapist assistant	Licensed clinical practitioner who provides client-focused interventions to help adapt the environment to increase the individual's independence, promote health, and prevent further decline or injury. OTs assess client's ability to do the things she or he wants and needs to do, and provides personalized recommendations to increase safety, ease, and ability now and in the future. Works with client to ensure recommended changes to the home are consistent with client's wants and needs, skills, and environment. For the purposes of the OAHMP licensed OTAs may implement findings of a licensed OT under the OT's oversight.
Solutions	Healthy Housing Solutions, the contractor conducting the evaluation of the OAHMP.

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