



# Boosting Digital Health Literacy for Older Adults in Affordable Housing

Lessons Learned from California Pilot Projects and Ideas for Jump Starting Your Own Program



UNIVERSITY OF CALIFORNIA

BERKELEY DAVIS MERCED SANTA CRUZ



CENTER FOR INNOVATION AND WELLBEING



# Table of Contents

<b>Acknowledgments</b>	<b>00</b>
<b>Introduction</b>	<b>01</b>
The Lighthouse for Older Adults Approach Benefits for Affordable Housing Community Leaders, Staff, and Residents	
<b>Lighthouse Project Principles</b>	<b>05</b>
<b>About This Guide</b>	<b>06</b>
<b>Step 1: Planning Steps and Checklist</b>	<b>07</b>
<b>Step 2: Knowing Your Audience(s)</b>	<b>11</b>
Resident Data and Profile Surveys Group Discussions	
<b>Step 3: Community Buy-in</b>	<b>14</b>
Materials for Staff Materials for Resident Ambassadors Materials for Residents Materials for Residents' Family Members	
<b>Step 4: Getting Ready to Launch</b>	<b>16</b>
<b>Step 5: Initial Training on Devices</b>	<b>17</b>
<b>Step 6: Maintaining Engagement and Support</b>	<b>19</b>
<b>Step 7: Understanding Progress and Success</b>	<b>21</b>
<b>Resources and Links</b>	<b>23</b>

# Acknowledgments

This guide reflects the efforts of many individuals and partners. Davis Park, Sheri Peifer, Therese ten Brinke, Kari Olson, and Jennifer Lee contributed expertise, ideas, and materials from their involvement in the Lighthouse for Older Adults project design and pilots and reviewed multiple drafts of the guide, as did the evaluation team at the UC Davis School of Medicine Office of Research: Rebeca Giacinto, Pauline DeLange Martinez, and Stuart Henderson.

Service coordinators, Executive Directors, and support staff at Front Porch and Eskaton and many other partners were key to the pilot projects' implementation. They include:

- Majd Alwan
- Susan Aureus
- Ginna Baik
- Julie Bataille
- Dave Berger
- Juliana Bilowich
- Elaine Brattin
- Emily Caplan
- Elizabeth Catron
- Sara Choi
- Adrian Clark
- Scott Code
- Judy Collette-Miller
- Soraya Diaz
- Denise Edmunds
- Ryan Elza
- Frank Fadaghi
- Kathy Fields
- Colleen Flynn
- Charles Garcia
- Ramses Gonzalez
- Kami Griffiths
- Kathy Isaac
- Janet M. James
- Kamal Jethwani
- Tom Kamber
- Chris Lee
- Jen Lewis-Walden
- Nicole Lezin
- Violet Anna Lieby
- Sarah Lin
- Jessica Longly
- Ty Mayberry
- Emilio Merino
- Naomi Perry
- Shannon Piexoto
- Key Provinchain-Colvin
- Julie Rainwater
- Dennis Rathod
- Amanda Raynal
- Yolanda Robles
- Joseph Rowe
- Donna Silbert
- Katherine Smith
- Justin Stevens
- Shinnæ Sung
- Trau Vang
- Sonia Villalta
- Yvonne Yi

The team also thanks the Building Healthy Places Network, Decimal.health, GMMB, Cole Communications, and CDW.

# Introduction

Aging in America can be a difficult process to navigate without support. Many elders today live alone, away from family members or in communities or cities that would not be considered accessible. Even though technology could be leveraged to help bridge some of these barriers to inclusion, many older adults live without access to broadband internet or the resources and training needed for sustained adoption. Increasing access to technology can help elders connect and can have a profound impact on their health, relationships and overall well-being.

The COVID-19 pandemic exposed existing gaps between the digitally connected and disconnected even more starkly. According to research commissioned by the Humana Foundation and AARP's Older Adults Technology Services (OATS) and presented in the recent Aging Connected report<sup>1</sup>



- 22 million American adults aged 65+ lack broadband access
- Older adults who have low incomes are 10 times more likely to be offline
- Over 80% of COVID deaths in the United States were among older adults, and approximately 40% of these individuals are believed to have lacked the digital connectivity that so many of us relied on for social interactions, telehealth appointments, and so much more.

**The Aging Connected data analysis also emphasized the equity dimensions of the digital divide:**



**The picture that emerges from these data is again one where overlapping characteristics of education, race and immigration, health, gender, isolation, rural residence, and disability are factors that compound one's likelihood of lacking broadband at home for older adults.**

<sup>1</sup>Aging Connected. The Humana Foundation and Older Adults Technology Services. Available from:

[Download](#)

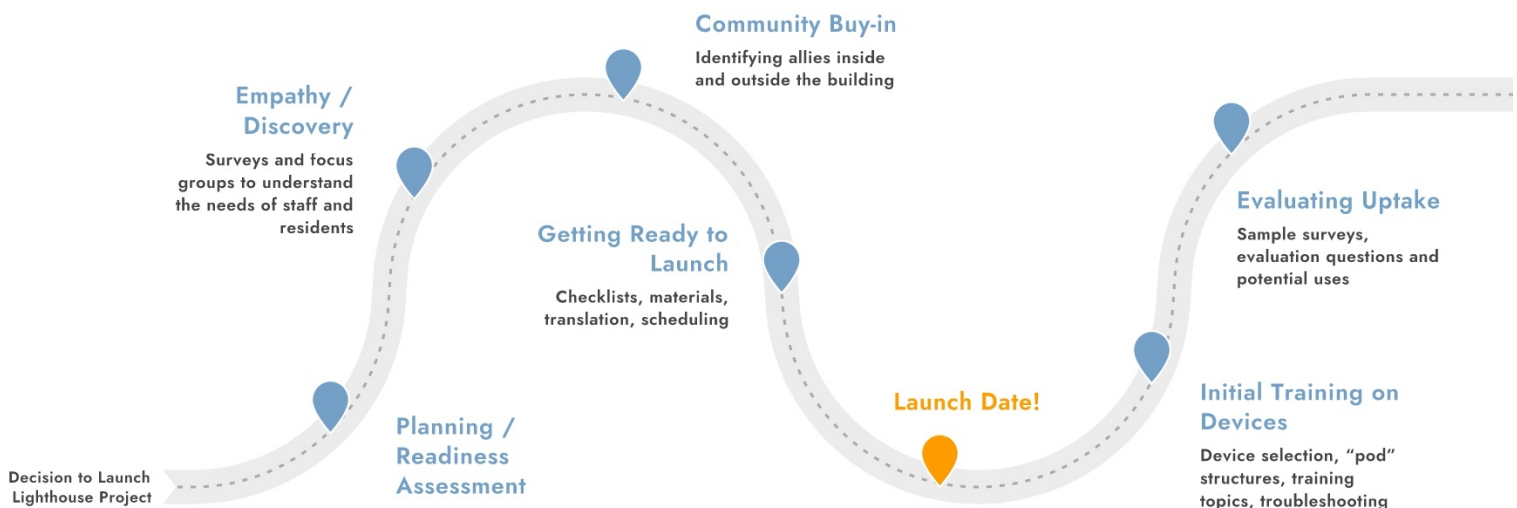
This guide presents lessons for addressing gaps in digital health literacy for low-income older adults drawn from Lighthouse for Older Adults, a California digital access and literacy pilot program. As described in more detail throughout this guide, the Lighthouse program is designed to connect seniors in affordable housing communities with broadband access, while recognizing that access alone is not sufficient to bridge the gaps.

## The Lighthouse for Older Adults Approach

The Lighthouse approach pairs broadband access with the skills and support needed for older adults to take advantage of broadband access in ways that improve their health, social connections, and overall well-being.

As key components of the Lighthouse approach, training opportunities and support are embedded in one-on-one and group social interactions, to reduce barriers and encourage participation by residents who may otherwise feel intimidated by learning new skills and using unfamiliar technology. Feedback from residents and staff in affordable housing communities informs every step, and strategies to engage staff as internal champions are key to the process.

## Lighthouse Project Roadmap





## Benefits for Affordable Housing Community Leaders, Staff, and Residents

For affordable housing community leaders, the decision to add or upgrade broadband is a precursor to the other steps in this process. Links to resources for doing so are part of this guide, but not the main focus. For leaders who invest in these types of programs to increase digital access and literacy, community-wide benefits include:

- easier flow of internal information (e.g., promoting community events)
- more options for social connections in multiple directions (among residents, across language barriers, with family members, between residents/family members and staff)
- increased access to services, such as telehealth.

A LeadingAge quarterly [survey](#) of affordable housing providers during the height of the pandemic identified reasons why providers believe internet access is important:

- 84.7%: improves residents' well-being
- 61.3%: increases access to telehealth
- 41.1%: promotes digital equity

### Resident Ambassadors

"Before the project, I didn't know many people at the community. Being a Resident Ambassador allowed me to get to know my neighbors and to socialize, which I really enjoy doing." —Resident Ambassador

"This program benefits me by helping keep me busy and exercise my brain, which is good for memory loss prevention." —Resident Ambassador

"I like to help other people. This is a good opportunity to help the neighbors. I met some neighbors I didn't know - especially ones in different buildings far away from where I live." —Resident Ambassador

“Our maintenance staff is using GoogleTranslate on their tablets to communicate with Korean-speaking residents. For example, they use the tablet to ask, “May I change your lightbulb?” —**Front Porch Staff**

For residents of affordable senior housing communities, benefits include the opportunity to not only learn new and useful skills, but to teach others for those who serve as Resident Ambassadors, a feature of the Lighthouse approach described in greater detail later in this guide.

In the California pilot projects, many residents previously experienced isolation or even exclusion from former technology initiatives due to language barriers. Because the training was offered in 14 languages, language barriers were reduced. An unexpected benefit was that residents who learned how to use features such as Google Translate were able to communicate for the first time with their fellow residents who spoke other languages.

## Resident Service Coordinators

“Many of our residents are chronically ill or going in and out of the hospital. With them in mind, the tablet has made resources more accessible and convenient.” —**Resident Service Coordinator**

“I’ve noticed Resident Ambassadors encouraging other residents. It’s a morale boost. For example, during workshops, they would tell other residents, ‘Even though we’re old, we can do this. It’s fun.’” —**Resident Service Coordinator**

“Many Korean female residents had a limited education and were forbidden from attending school at all. Many of these women never learned how to read or write, and if they did, it was typically capped at the middle school level. For residents that we noticed had trouble typing or reading, we encouraged them to use the microphone function when searching YouTube videos and taught them to look for/use the microphone icon when they needed to type something in.” —**Resident Service Coordinator**

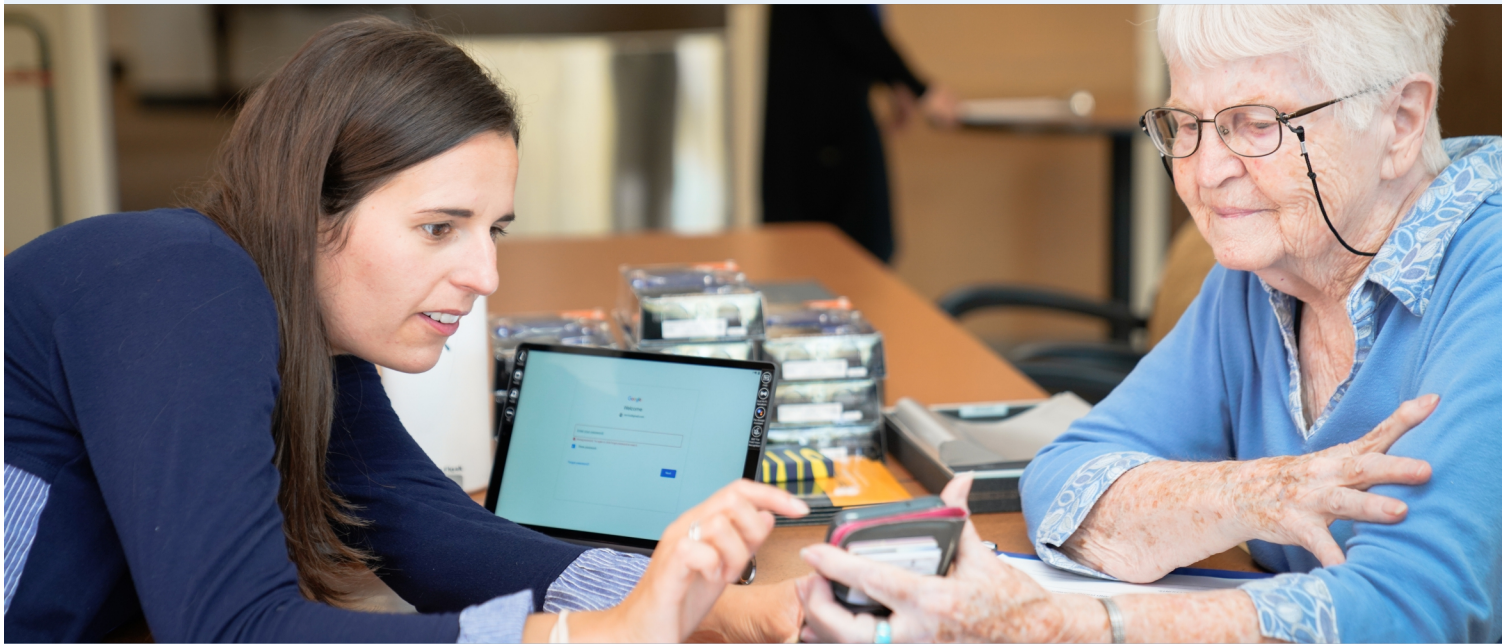
“After attending the Google Translate training lesson, one of the English-speaking residents used it with her (non-English speaking) neighbor and it really helped; she was so excited to be able to talk to a neighbor she could never talk to before!” —**Eskaton Staff**

In addition, increased digital access allowed staff to share time-sensitive information with residents more efficiently, such as emergency response or power outage notifications.

For some residents, the digital access and health literacy did lead to less isolation and greater access to services through health portals and other mechanisms. Despite the increased engagement among residents, effects on health outcomes were challenging to ascertain in preliminary evaluation findings, but may accrue over time.

## Lighthouse Project Principles

- **Equity:** older adults in affordable housing are more vulnerable due to multiple inequities; digital inequity should not be an additional burden
- **Empathy:** explore and respond to residents' and staff members' needs, tailoring the intervention to match residents' skills, motivations, and interests
- **Inclusive, peer learning:** empower resident leaders (Resident Ambassadors); organize peer learning “pods” to learn together, reinforce concepts, decrease barriers, and foster more social connections and reinforce concepts
- **Flexibility:** any technology project requires adaptability as devices, hardware, software, and infrastructure shift
- **Persistence:** Lighthouse is an investment for future residents as well as current ones; it requires time and effort but yields benefits for residents, staff, and care givers
- **Reflection:** Use evaluation and other tools for continuous quality improvement to assess what is working (or not)





# About This Guide

This guide assembles resources, insights, and tips from Lighthouse for Older Adults pilot projects conducted between 2020 and 2022. Although the materials are geared to affordable housing communities for older adults, the findings should be relevant to other settings seeking to increase digital access and health literacy.

The materials are organized into seven sequential steps:



Throughout the guide, icons refer to resources that could be adapted for other settings (such as survey instruments, flyers, etc.), tips from those who have implemented these programs, and stories that illustrate Lighthouse in action.



Resources



Tips



Stories

A final section compiles all the **resources and links** in one place.

# Step 1: Planning Steps and Checklist

Like any major project, enhancing digital access and literacy in any setting involves changes to infrastructure as well as human behaviors—each challenging in its own way.

These components are discussed in greater detail in Steps 2-7 and are presented as an initial approach to consider in building a Lighthouse program. They are listed here as ways to assess an organization's basic readiness to embark on this effort, followed by a sample implementation checklist used in one of the pilot projects to track the sequence of steps and subcomponents.

## ✔ Overall Readiness

Internal champions within the leadership team and staff (particularly Resident Service Coordinators, Resident Ambassadors and management) with sufficient motivation and time to support the project

Champions from outside the community (e.g., service partners, funders)

Others interested in getting involved (e.g., technology companies; libraries; local schools/ colleges)

## ✔ Broadband / Wi-Fi Access

Aspects of your location and building could affect broadband infrastructure construction, installation, budgets, and timelines (e.g., urban/rural, number of units, multi-structure layout, building construction)

Sources and extent of available funding. The Lighthouse Project pilot evaluation documented initial capital costs in a broad range, from \$520 to \$2,400 per unit, depending on the factors above.

## ✔ Marketing and Promotion

Communication plan to educate community staff and residents about the project

Materials (flyers, newsletter copy, posters) to adapt for marketing and promotion

Ways to build and sustain excitement and motivation



### Resources for Broadband / Wi-Fi Access Funding and Implementation

[LeadingAge Broadband in Affordable Housing: A Guide for Providers](#)

[Funding for High Speed Internet for Congregate Living](#)

[SAHF Bridging the Digital Divide in Affordable Housing Communities](#)

[California All: Broadband for All](#)

## ✔ Learning About Residents' Needs

Types of information needed (e.g., existing devices; potential uses/ motivation; ways to tailor training and support for the community)

Existing venues for gathering information (e.g., resident and staff meetings, events) and what combination of formats makes sense for additional data gathering (surveys, interviews, focus groups)

Language and cultural preferences of residents

Individuals (residents, staff) who can help lead these efforts and spread the word to boost participation

Tools / instruments to adapt to gather information

Additional information needed for other purposes (e.g., extent of evaluation needs, such as resident satisfaction versus more extensive funder reports or research studies)

## ✔ Resident Participation and Readiness

Early outreach and engagement with the community to ensure participation in planning and implementation

Potential candidates to be Resident Ambassadors (i.e., early adopters who can help promote the program and train others)

How and when Resident Ambassadors will be trained, and who among the staff can support them

## ✔ Digital Literacy Training and Tech Support

Curricula most appropriate for residents' interests and skill levels, as well as formats and languages to meet residents' needs

Where/ how could tech support office hours (for regular, ongoing tech support) could be set up, and scheduling options

Learning pods (e.g., size, convening, support)

## ✔ Device Selection Choices

Device features to meet residents' needs and reduce barriers (e.g., screen size to compensate for vision changes, audio quality for hearing loss, stylus options for dexterity, language capabilities)

Apps or uses of particular value or cultural relevancy to residents (e.g., translation apps, video chats and in-language entertainment apps)

Privacy or other considerations related to tracking/ evaluating device use

Prior to distributing surveys, identify areas of interest for tracking that are feasible to assess and/or change within the project timeline, as part of a data collection plan. This could include developing and tailoring survey questions as needed and providing training to staff to support survey completion and timeliness.



# Sample 15-month Implementation Checklist, by Quarter

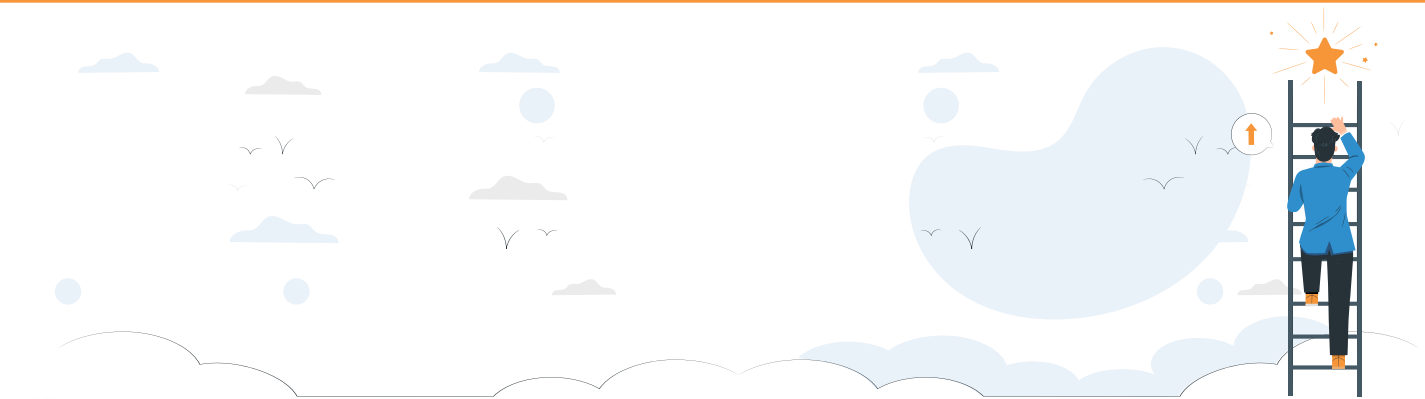


**Note:** Sample materials (surveys, PPTs, guides, flyers) are available for adaptation; see Resource section or links in subsequent steps.

Project Lighthouse Milestone	Q1	Q2	Q3	Q4	Q5
<b>Initial Data Collection and Preparation</b>					
Host project launch meeting with staff					
Pull American Association of Service Coordinators (AASC) data or data representative of demographic profile					
Create community profile					
Create, distribute and analyze empathy survey					
Create educational PPT for project					
Host project presentation for residents					
Host staff and resident focus group, including device options					
Analyze focus group input					
<b>Device Configuration and Planning Logistics</b>					
Complete device selection with project team					
Order devices					
Configure devices (downloading appropriate apps, changing accessibility settings i.e. font size, screen zoom, changing language, etc.)					
Write/ draft letters to residents re: project					
Create promotional collateral					
Create age-friendly user guide (allowing for additional translation time if necessary)					
Create educational digital literacy PPTs; translate as needed					
Provider promotional flyers to community; translate as needed					

Continued

Project Lighthouse Milestone	Q1	Q2	Q3	Q4	Q5
<b>Staff Training</b>					
Host staff meeting and training					
Deploy staff devices					
<b>Resident Ambassador Recruitment and Training</b>					
Host Ambassador meeting and training					
Deploy Ambassador devices					
Schedule Resident Ambassadors to co-instruct workshops and staff tech help desk					
<b>Resident Scheduling for Distribution and Training</b>					
Select deployment date					
Translate materials into appropriate languages					
Tablet and entry packet preparation					
Training 1 (e.g., Device Basics) Training 2 (e.g., YouTube; Contacts; Sending & Receiving Messages)					
Training 3+ (e.g., Accessing Community Information; Games; Zoom; downloading Apps; taking and accessing photos; email)					
Consistent tech support office hours (e.g. twice a week or weekly)					
Arrange follow-up activities based on resident interests and needs (Resident Ambassador tech support, accessing local resources, refresher workshops)					
<b>Evaluation activities</b>					
Develop evaluation questions and surveys, as appropriate (e.g., quality and implementation monitoring vs. more in-depth research outcomes)					
Distribute and collect baseline survey					
Distribute and collect 30-90 days survey					
Analyze evaluation surveys to finetune project for future cohorts					



## Step 2: Knowing Your Audience(s)

The Lighthouse Project team describes the process of gathering information from residents and staff as the “empathy” step. As with any initiative designed for a population of end users, the team notes that project staff should not make assumptions about what either staff or residents want and need. A combination of demographic data, surveys, interviews, and small group discussions were used during the pilot project to gain insights from both staff and residents.

Through community surveys, focus groups, and interviews with residents and staff like those described below, the Lighthouse Project pilot's empathy process helped identify the appropriate technology devices for the community. Examples include selecting devices with larger screens for low vision, good quality speakers or extra headset devices for people living with low hearing, video chat capabilities, styluses to help users struggling with fine motor skills, and multi-lingual accommodations.

Some of the data collection tools (such as the initial survey) also could serve as a baseline for future evaluation surveys, comparing comfort with devices and their use before and after the project has been implemented. (Evaluation surveys are described in more detail in Step 7.)



## Resident Data and Profile

Working with Service Coordinators and site leadership, the Lighthouse Project team collected demographic data on residents to inform the project's implementation. Much of this data is readily available through the database, [American Association of Service Coordinators \(AASC\)](#) which annually collects and updates a comprehensive range of demographic information such as:

- Living with (spouse of partner, children, care provider, others)
- If born outside the United States, country of origin
- Communication / languages used
- Highest level of education achieved
- Age
- Gender
- Partnership status
- History of homelessness
- Food stamp/ SNAP enrollment
- Race / ethnicity
- Veteran status and benefits

This information was used to tailor messages, invitations, and materials, especially taking language and culture into account. The surveys and group discussions, described below, helped fill in gaps and provided a deeper dive into how broadband access, devices, and training support could improve quality of life for residents.

## Surveys

As a pilot project, the Lighthouse Project included resources for research and evaluation that may not be available or necessary to others implementing this type of program. This section describes some of the tools used by the evaluation team; some may be more relevant to a particular community than others.

For example, the pilot team created and deployed an initial empathy survey of residents to obtain demographic information as well as self-reported rankings on perceived health and digital literacy. Over 500 residents across six communities completed the initial survey in 12 languages, which informed the project design at each community. In addition to collecting data that informed the selection of devices, languages for materials, and other features, the empathy surveys also served as an introduction to the project itself.

**A link to a sample survey can be found [here](#). The initial surveys covered the following topics to fill in some gaps left out of the AASC data reports:**

- Demographics, including education level
- Ease / difficulty with movement inside and outside their homes
- Self-ratings of physical and emotional health and well-being
- Specific challenges (e.g., vision, hearing, mobility, cognition/ memory)
- Social connectedness / isolation (to fellow residents, relatives)
- Access to health services and health-related information
- Technology and internet use (devices owned and how they are used, email account, comfort levels)

The goal in the Lighthouse pilot project was to reach a 90% response rate (in part to support the evaluation); \$20 gift cards were offered as an incentive. A high response rate may not be as crucial for others implementing the program; if so, a raffle or incentive for the first set of residents to complete surveys might also be effective.

In some of the pilot sites, getting the initial empathy surveys completed proved to be a challenge. Even with grocery store gift cards offered as incentives, participation was low at first, so the team offered extra gift cards to residents who could bring along five others, which helped.



### Empathy Surveys and Privacy Concerns

In the Lighthouse pilot, some residents were concerned about sharing personal information about their mental and physical health, fearing they might be treated differently by staff or even evicted. Residents may need reassurance that their individual responses will not be shared. Alternatively, if communities are not completing a formal research study, they may not need to ask questions related to mental and physical health, in order to increase response rates.



## Group Discussions

During the pilot, six communities hosted 60-minute focus group sessions to explore COVID-19 impacts, digital readiness, digital literacy, current barriers to technology adoption, and interest in participating in the Lighthouse Project. This process generated more information about features of devices that would be a match for the needs of residents, as well as insights about how they preferred to use and learn about technology, motivation to try new forms of technology, impact of COVID, current and potential use for different purposes (e.g., health care access), COVID impacts, and more.

A [link](#) to a sample resident focus group discussion guide can be found here. Note that AASC data and empathy survey results can be used to modify the focus group guides, diving into intriguing data points or inconsistencies.



### Using Empathy Data to Convene Resident Focus Groups by Specific Characteristics

In one of the pilot sites, the team sorted through data from the empathy surveys to reach out to residents who answered the questions in different ways, placing them in groups together. In addition to these groupings, consider prioritizing those who are concerned about falling (question B3), face challenges in vision, hearing, mobility, or cognitive/memory issues (question C3), and “early adopters” who already have Voice First devices (e.g., Amazon Alexa, Google Home Hub), wi-fi, and email addresses.

**“Tech Positive” Group:** Residents who strongly agreed with question D5: “I feel comfortable using technology information and devices.” and question D7: “I believe technology helps me to live well and independently.”

**“Tech Hesitant” Group:** Residents who strongly disagreed with both statements (“I feel comfortable using technology information and devices” and “I believe technology helps me to live well and independently”)

**“Socially Engaged” Group:** Residents who scored a maximum of 30 on the Lubben Social Scale Score and answered question C13 by answering “never” in response to: “How often do you feel lonely or isolated from those around you?”

**“Socially Isolated” Group:** Residents who answered “Poor” to the question, “In general, how would you rate your emotional health?” and residents who scored below 12 on questions C7-C12 on the Lubben Social Scale Score and answered “always” on question C13: “How often do you feel lonely or isolated from those around you?”

**“Connected/Not to Health Providers and Services” Groups:** Sorted based on responses to questions C5 (“Do you have access to all of the doctors and health services that you currently need?”) and C6 (“Do you have enough information about your health to help you take care of yourself?”)

Similar discussions were held with staff to explore the types of technology currently in use, training options, staff members' own comfort with technology, concerns and barriers, and details about staff members' roles in helping residents access services (such as health care, transportation, and food) as well as existing group gatherings and communications. A [link](#) to a sample staff discussion guide, along with a sample invitation letter, can be found [here](#).



## Step 3: Community Buy-in

The Lighthouse Project works best when every constituency within the community—leadership, staff, residents, and family members—supports the project's goals.

### Materials for Staff

The pilot project team developed materials that can be adapted easily to inform staff and residents about the project's goals and scope and gain their support. For example, a [PowerPoint slide deck](#) to introduce the project to staff is available here. It covers the overall mission and objectives, a suggested timeline, an overview of the empathy survey described above, staff roles, and immediate next steps.

Staff focus groups can help project planners understand the pain points and gaps in staff members' everyday duties. For example, despite working at a community for over a decade, the maintenance staff in one community were still relying on simple words and hand gestures to communicate with the predominantly Korean-speaking residents. After training staff on Google Translate, maintenance staff were more able to communicate effectively with residents—with more satisfying interactions for everyone.

Resident Service Coordinators (RSCs) know the residents best; encourage RSC input throughout every step of the process to benefit from their insights and to increase buy-in so that they will be able to replicate steps on their own and help sustain the project after the initial launch.

In addition to engaging with RSCs, management and environmental services staff should be included as well. If possible, assign a device to each staff member prior to the Resident Ambassador training. That way, the staff can become experts on the devices too. As residents see staff using the devices, momentum and interest will naturally build, and the project will be more visible outside of planned activities and promotions.

### Materials for Resident Ambassadors

In every community, some residents are trusted “influencers” among their peers. For a topic such as using new technology in unfamiliar ways, residents who can help coach their peers become even more important in helping others overcome initial obstacles—and provide the Resident Ambassadors with a sense of meaning and purpose.

The Lighthouse Project intentionally draws on the talents and connections of these resident-leaders by recruiting and training Resident Ambassadors (RAs). As the sample RA recruitment flyer ([linked here](#)) and invitation letter ([linked here](#)) explain, RAs can perform this role even if they themselves do not feel technologically adept; that's what their early training and device access are about. If they are enthusiastic about learning and about helping their fellow residents, they can become RAs, helping to troubleshoot any technological glitches, refer residents to additional support, and connect their peers to one another.

An RA training slide deck is available [here](#), covering some of the same ground that residents will receive later in the project, as well as specific support for the roles RAs will play.

The training, designed for two 2-hour sessions (ideally spread over two days), covers the Project Lighthouse mission and goals, as well as specific best practices (pacing, repetition, review, interaction with “students”), practice with specific technology tasks (e.g., a Google search), device basics and troubleshooting, cultural sensitivity, privacy and security, and how to seek help for questions they are unable to answer.

Once they are trained, RAs will assist with distributing the devices, serve as class leaders for training classes (alongside a staff instructor), host Tech Help Desk hours, and, if interested, receive support to teach and lead their own workshop for their peers. If they are able to support translation for monolingual peers, that also is a potential role for them.

In exchange for taking on this role, RAs will receive early access to the devices as well as other incentives (e.g., gift cards, certificates, t-shirts) as the project budget allows. In addition to these benefits, RAs will receive training and support for their roles as leaders, as well as extra practice using the devices so they feel comfortable sharing their knowledge.

## Materials for Residents

Residents received information about the Lighthouse Project in many different ways. Some were invited to informational or educational sessions by peers (e.g., the RAs described above); others responded to letters or flyers (translated into multiple languages). A sample educational session flyer can be found [here](#) and an invitation letter [here](#).

These materials emphasize the group learning approach, ongoing support, benefits to residents, and the fact that in the pilot program, devices and support were offered at no cost to the residents. Residents are grouped into learning pods of about four residents each, and they are encouraged to help each other in various ways. For example, pod members remind each other of upcoming classes; if a pod member notices that another is not in class for a particular workshop, they can call them to see whether they would like to join in and also offer to catch them up later on what was covered (which also reinforces learning for the pod member who is sharing information). A sample pod grouping and “pod practices” reminder can be found [here](#).

In general, the pilot project affirmed that engaging residents who are unfamiliar with technology can be challenging, but this barrier can be overcome with encouragement and support. See Step 4, below (Getting Ready to Launch) for more ideas about communicating with residents, including compiling a welcome packet for those joining the project.

## Materials for Residents’ Family Members

One of the main antidotes to loneliness and isolation is connection to relatives or friends outside the community. During COVID lockdowns, contact was extremely limited (even within common areas), so these connections took on added importance. Technology-driven connections—such as emails and video chats—can help, and family members can both participate in these exchanges and encourage their relatives in affordable senior housing to give new devices and apps a try.

A sample flyer for family members, explaining the project and encouraging them to participate, can be found [here](#).



### Forming Pods of Residents to Share Their Tech Journeys

Assign the community staff (typically Resident Service Coordinators) to group residents based on existing friendships, language, congruency, proximity, existing tech literacy (i.e., grouping tech savvy residents with non-tech savvy residents), and even gender, so that pod members can start off with some things in common and a higher comfort level with one another.

## Step 4: Getting Ready to Launch

The Lighthouse launch will be focused on distributing devices to residents and training them on basic use (described in more detail in Step 5, Initial Training on Devices). Prior to device distribution, the team will have spread the word about the opportunity, recruited and trained staff and RAs so they will be ready to help and encourage their peers as needed, and assembled welcome packets for those interested in receiving the devices and training.

**The pilot projects generally followed a sequence like the one below, which can be adapted to different circumstances:**

- Configure tablets (enable Mobile Device Management software if appropriate, enlarge font size, screen zoom, preset language, download appropriate apps, remove unnecessary apps that clutter screen and are overwhelming)
- Develop and adapt materials along with internal champions (e.g., RSCs) to inform acceptability for use among residents
- Translate materials (entry surveys, guides, training handouts and slides) into residents' languages
- Distribute devices and provide training for RAs
- Assemble welcome packets for residents (welcome letter, support guide, device user guide, training syllabus, family letter, wi-fi policy)
- Schedule and publicize training workshops, office hours, and help desk sessions for initial device distribution and activation
- Form learning pods so that residents can attend workshops and learn together



**The links below offer examples of the materials used during the Lighthouse pilots:**

- [Welcome letters for residents and family members](#)
- [Resident Initial Education Session slide deck](#)
- [Learning Pods schedules example](#)
- [Resident device pick-up schedule and letter](#)
- Device guides (e.g., Google Hub Max screen-based devices, [Lenovo Yoga Android tablets](#), [Samsung TabA Android tablets](#), [Amazon Alexa Echo Shows](#))
- [Tablet troubleshooting guide](#)
- [Entry survey](#) (baseline survey to be followed up at 30- and 90-day intervals or longer for evaluation purposes)



## Step 5: Initial Training on Devices

The choice of devices for residents is an important one. It is unlikely that any one device will meet all residents' needs, as we had learned throughout the Lighthouse project, but offering the same device to all residents simplifies training and support. For the pilot projects, the teams used different devices in different sites; devices were donated to the project. They included:

- Google Hub Max screen-based devices (Volara)
- Samsung TabA Android tablets
- Lenovo Yoga Android tablets (CDW, Parker grant)
- Amazon Alexa Echo Shows (Amazon)

One consideration is whether to use consumer-based or mobile device management (MDM). MDM offers options for monitoring use, which can contribute to ongoing evaluation and fine-tuning and also offers opportunities to standardize upgrades and other features. However, some residents may have concerns about privacy and sharing data about which apps they are using or which websites they are visiting. Consumer-based devices are simpler to set up and avoid privacy concerns, but also make it more difficult to upgrade and monitor use.

During the pilot, the team learned that MDMs may impact the residents' use of their devices, especially within the Google ecosystem. For example, with Intelligent Hub (the MDM FP used), devices were partitioned into two sections: personal and work. When residents logged into their Gmail account in the personal section, the work section would interfere, putting them through a loop of entering their email addresses and passwords. This was also the case with other apps that required a Google login (i.e., Google Play Store, YouTube).

Supporting residents who are new to technology or who have had frustrating experiences in the past can be time-intensive. Typically, some one-on-one support will be needed, ideally in residents' own language and from a trusted source. In addition to initial training, residents will need ample time to adopt the new technology, again ideally with reinforcement and support from trusted sources (their RAs and/or fellow pod members). Booster classes following an initial training, pod or group meetings to try new apps, and additional support are likely to be needed to maintain engagement and should be factored in to staffing, scheduling, and budget assumptions.

The pilot projects began with a basic device training workshop, followed by specific applications of interest to residents (e.g., Google Translate, YouTube, Zoom). The team recommends at least four classes in the initial series, building from the basics to more advanced applications (but a few at a time, to avoid overwhelming residents new to the devices and technology). See the tip box below for more details and the rationale for sequencing training.



The pilot projects gathered and developed variety of training resources, such as facilitator guides, curricula, and slide decks. They advise an intensive focus on the basics: how to tell when a battery is depleted, for example, or how to charge devices, turn them on and off, and check wi-fi connections. Aspects of device use that seem routine to those accustomed to using a variety of devices will not be self-evident to new learners.

A basic tablet troubleshooting [handout](#) (included in welcome packets above, as well) can help prevent frustration and reassure residents that they are not alone in their learning curves.

In addition to those listed in Step 4 above (such as device and tablet troubleshooting guides), materials from the pilot projects available for adaptation include:

- [Facilitator Workshop Curriculum Guides \(e.g., for Lenovo Yoga Tablets\)](#)
- [Sample Workshop Calendar](#)
- [Lesson Plans for Basics](#) [Google Translate](#) [YouTube](#) [Zoom](#)
- [Workshop Syllabus](#)



### Designing Training Sequences and Content to “Stack” Lessons and Build Confidence

The sequence of the Lighthouse Core Curriculum workshops is intentional, with lessons “stacked” to build skills and confidence. Start with something relatively easy and familiar, like YouTube, to build up residents' confidence and engagement. Although residents may already be familiar with YouTube itself, they can use this session to practice important skills like adjusting the volume, learning the video control icons, etc. This is a form of “stacking” lessons to reinforce skills before moving onto more complex tasks.

For example, when teaching “Tablet Basics,” we teach residents how to use the camera function to take photos. It's a relatively simple skill that most residents enjoy, especially taking selfies with fellow Pod members or friends.

The following week, we teach Google Translate (including speaking, typing, and camera translation features). We make this lesson relevant and “stack” their skills by showing them how to use the camera function in Google Translate to take a photo of mail they receive in English (e.g., social security, EBT) and then translate it into their native language.

Feeling successful with one task builds curiosity and confidence to branch out and learn more!

#### Additional training tips and suggestions from the pilot include:

- Start with 1 hour, once per week (or 90 minutes, if possible).
- Keep the instructor-to-participant ratio low.
- Go slowly, providing a demonstration and then allowing residents to practice step-by-step. Repetition is essential!
- Engage more experienced residents in helping others with less experience.
- Gather feedback after each class (suggestions for improvement, future training topics of interest). Topics also can be “harvested” from questions cropping up at tech support / office hours sessions.

## Step 6: Maintaining Engagement and Support

Once the devices have been distributed and initial training workshops are complete, what's next? In the pilot projects, a variety of activities helped keep up the Lighthouse Project momentum and sustained community engagement.

### ■ Here are a few ideas:

**Setting up a Tech Help Desk.** Like the “Genius Bar” at Apple stores, regular office hours for tech support (staffed by RAs and/or others, such as student volunteers or staff) can reinforce learning from the initial training workshops, help troubleshoot issues as they arise, and surface new ideas for ongoing training or apps that residents want to try. (Notably, no one used a 1-800 number for tech support that was available during the pilot project!) Track topics that come up frequently in these sessions so that they can be incorporated into future workshops.

**Refresher Workshops.** Repetition is key, especially when it comes to older adult learners. Feel free to recycle your workshop curriculum and host "Refresher" series if you feel additional review is needed. This will also benefit those who may have missed the initial workshop and will help reinforce learning concepts for students repeating the workshop.

**Holiday or other event tie-ins.** At one of the project sites, a holiday-themed “[ConnectActivity](#)” was set up like a Bingo board, with “contestants” completing three tech-related tasks (such as taking a picture in their holiday outfits, making a video call, using Google Translate, or playing a YouTube video). A “bingo” earned entry into a raffle for a gift card.










**Using technology/ devices for other activities.** To help reinforce learning, meet residents' needs and interests, and offer more variety and services, some Lighthouse Project sites incorporated other classes and activities (such as chair yoga) into Zoom or other virtual meetings. This again helped residents practice what they had learned, while also sparking interest among other residents.

**Showcasing residents' talents with resident-led activities.** Residents bring a wealth of talents and knowledge that they are often eager to share with others. Resident-led activities are a great way to maintain engagement with technology by weaving in a tech feature, such as broadcasting an arts and crafts, exercise, or discussion group via Zoom as an option for those who cannot attend in person. Pods may also want to take on activities together, such as virtual scavenger hunts using Google Chrome, finding a topic to explore on an online workshop, or finding a favorite movie or show to view together.

### ConnectActivity

**Directions:**

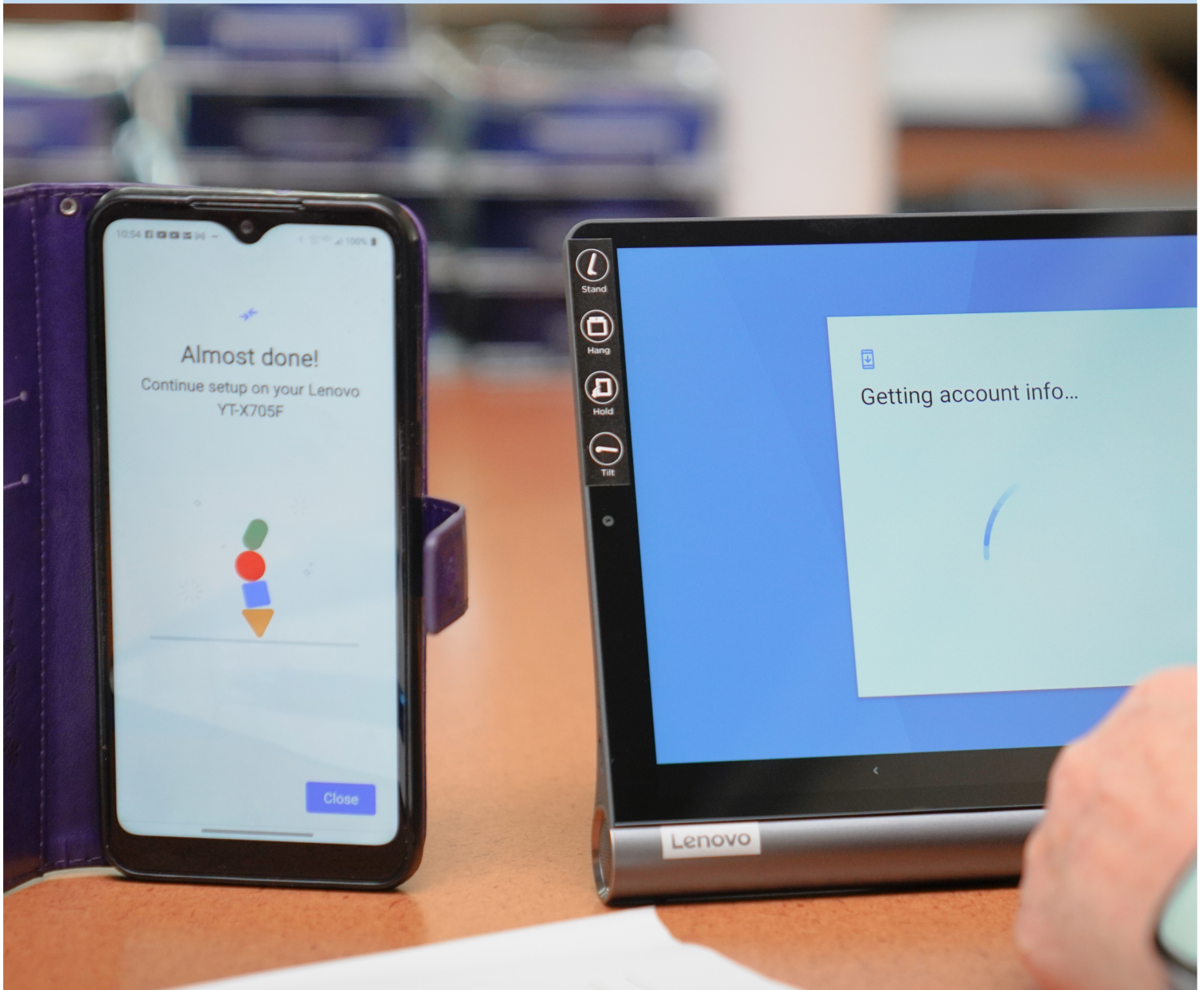
- Use your tablet to do 3 activities in a row
- Show proof to [STAFF NAME]
- Get entered into a raffle for a [REWARD]
- You have until [DATE]
- One entry per person

 <input type="checkbox"/> Send a text on Googleduo	 <input type="checkbox"/> Take a picture with a someone	 <input type="checkbox"/> Play a video on Youtube
 <input type="checkbox"/> Take a picture in a holiday outfit	 <input type="checkbox"/> Show an application you downloaded from the PLAY store	 <input type="checkbox"/> Take a picture with a someone
 <input type="checkbox"/> Make a video call on Googleduo	 <input type="checkbox"/> Take a picture with Santa in community room	 <input type="checkbox"/> Translate message on flyer using Google Translate

**Convene a resident interest group.** For those who wish to meet more informally, a set day and time can be established to practice using their devices together and offer helpful tips from others' trial-and-error (and/or seek help from the tech support desk or RAs).

**Prepare a sustainability plan.** One of the pilot project sites developed a formal [sustainability plan](#) , documenting additional planned workshops, timelines, and roles and responsibilities.

As part of the roles and responsibilities section, the sustainability plan includes a job description and expectations for volunteers, who could be an important part of maintaining and supporting these projects (e.g., through intergenerational connections between college students and seniors in affordable housing communities).



## Step 7: Understanding Progress and Success

Building in strategies to assess the value, quality, and outcomes of activities is a key element of digital health literacy and similar programs. For the Lighthouse pilot project ongoing evaluation was used to test whether the Lighthouse for Older Adults model could be implemented across a variety of settings. Evaluation tools ranged from one-page feedback forms to measure satisfaction with the specific training workshops among residents [\[link\]](#) to more in-depth surveys administered at baseline, 30-, and 90-day intervals to assess change for outcomes of interest across time.

1. [One Month](#)

2. [90 Days](#)

Evaluation tools, including surveys, were developed in collaboration with communities to ensure cultural and linguistic appropriateness as well as acceptability among diverse residents. Surveys were translated, piloted, and tailored according to feedback from residents and community staff during the pilot phase. Evaluation surveys, administered across three timepoints, included evidence-based, repeat measures and other questions more specific to the project and the device selected for the community. Survey questions, explored residents' self-reported physical and emotional health, risk for depression, isolation, and loneliness, and social connections with relatives and friends. In addition, technology-specific questions examined frequency and preferred use of the devices and applications (e.g., YouTube, instant messaging, video calls, seeking health information, connecting to health providers), the resources they relied on to help them use their devices (handbooks, classes, Help Desk, pod members, others), as well as their views of and comfort with technology.

Sharing evaluation results and incorporating feedback to guide ongoing development of the project is important. Pilot survey results assessing change across all time points were presented back to the Lighthouse project team as well as each participating community to inform strategies implemented as well as gain further insights and context related to the survey findings.

These surveys were useful to inform the pilot project's process and outcome evaluation, and may be useful to other communities, particularly in seeking initial or additional funding or resources for these projects or considering comparing or using results to engage more residents in the future. Qualitative interviews with community staff after the completion of the project is also valuable for gathering feedback on lessons learned for project improvement and tailoring future approaches.

Findings from the evaluation of the Lighthouse pilot project are available in a case study prepared for [LeadingAge](#) and are summarized on the next page.





## Initial Findings from the Lighthouse for Older Adults Pilot Project Evaluation

### **Participation in the program was high.**

Approximately 70% of residents participated across the first three communities included in the Lighthouse Project. Primary reasons reported for non-participation included low interest or relevance in the device, perceived difficulty, and/or burden to complete surveys and/or to learn to use the device. In addition, declining health, such as visual or cognitive challenges, also influenced participation.

### **Participants access their devices frequently.**

When participants across the first three Lighthouse communities (N=167) were surveyed at approximately 3 months post-intervention, 76% of participants reported using their tablets at least twice per week and over a third (36%) reported using their tablets daily. The most popular use for the tablets was to access YouTube, followed by checking the weather and/or taking photos.

### **In-person training is most helpful to participants.**

In-person classes were the most helpful resource reported among participants to learn to use their tablets (87% rated the classes as “somewhat” or “very” helpful), followed by the in-language user guide (85%) and tech support from a family or friend (72%).

### **Technology encouraged in-person engagement and communication.**

Beyond using the devices to connect with the outside world, in-person communication and engagement also increased as residents engaged with each other to learn more about using the devices, try out apps and translation features, and/or participate in office hours and peer learning groups. In addition, seeing others learn about and use the device also encouraged more apprehensive residents who initially declined to participate to engage with the device.

### **Comfort using devices increased over time.**

From pre-intervention to 3-months post-intervention, there was a 14% increase in those who “strongly” or “somewhat” agreed they felt comfortable with technology (defined as computers, laptops, tablets or smartphones). There was also an 11% decrease in those who “strongly” agreed that “technology is confusing.” Training along with tech support is key for residents to become more comfortable in trying new technology.

### **Continued support and training are necessary.**

At 3 months post-intervention, over half of participants reported that the tablets were “somewhat” or “very” difficult to learn, indicating a need for ongoing classes and tech support. In particular, to troubleshoot challenges, the Lighthouse project findings suggest that continued support to address questions was necessary as well as encouragement to learn and try out new features.

# Resources and Links



# Resources & Links

## Step 2: Knowing Your Audience(s)

- Empathy Survey Sample
- Resident Focus Group Discussion Guide
- Staff Discussion Guide
- Sample Invitation Letter

## Step 3: Community Buy-in

- PPT deck to introduce project to staff
- RA training slide deck
- Resident education session flyer
- Sample flyer for family members
- RA Recruitment Flyer
- RA Invitation Letter
- Resident Educational Session Invite Letter
- Learning Pods Schedule

## Step 4: Getting Ready to Launch

- Welcome letters for residents and family members
- Resident Initial Education Session slide deck
- Learning Pods schedules example
- Resident device pick-up schedule and letter
- Device guide (Amazon Show)
- Device guide (Lenovo Yoga Tablet)
- Device guide (Samsung Tablet)
- Tablet troubleshooting guide
- Entry survey

## Step 5: Initial Training on Devices

- Facilitator Workshop Curriculum Guides
- Sample Workshop Calendar
- Lesson Plan (Basics)
- Lesson Plan (Google Translate)
- Lesson Plan (YouTube)
- Lesson Plan (Zoom)
- Workshop Syllabus

## Step 6: Maintaining Engagement and Support

- Holiday ConnectActivity Bingo Card
- Sustainability Plan

## Step 7: Understanding Progress and Success

- Workshop Assessment
- Follow-up Survey (30 days)
- Follow-up Survey (90 days)
- LeadingAge Case Study