

Healthy@Home 2.0

Full Report



Linda L. Barrett, Ph.D.
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Knowledge Networks

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AARP
Research & Strategic Analysis
601 E Street, NW
Washington, DC 20049

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Author's Acknowledgements

I thank Dr. Majd Alwan, Director, Center for Aging Services Technology, Dr. Jeremy Nobel of the Harvard School of Public Health, Laurie Orlov, Aging-in-Place Technology Watch, Elinor Ginzler, AARP Vice President for My Health, Jody Holtzman, AARP Vice President for Thought Leadership, Jeff Makowka AARP Senior Advisor for Thought Leadership, and Dr. Teresa A. Keenan Health Team Lead for AARP Strategic Issue Research, for reviewing various parts of this research. I also thank Michael R. Schuster, AARP Senior Associate General Counsel for his review of this work.

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Executive Summary and Recommendations for the 65+

Introduction

It is not surprising that people 65+ want to continue living in their homes for as long as possible, or that health and financial security rank high among their concerns. However, a fair share says they do not need anything in the next five years to live on their own, or don't know what they will need. How does this feeling of uncertainty square with their desire for peace of mind and security? Is there a balancing act? No matter how you look at it, we are entering uncharted territory and welcome you to join us on this journey.

The original 2007 study measured people's awareness of new technology that could help them stay in their home and be healthy / independent as well as their willingness to use the technology even if they had not heard about it before. We also asked about telemedicine and telepharmacy. This time, we added questions about current use of the technology, along with awareness, willingness to use, amount they would expect to pay for such devices or services, and the amount they currently have in their budget to pay for such devices or services.¹

What do People 65+ want?

Living at home is still of paramount importance for adults age 65+. More than nine in ten respondents *somewhat* or *strongly agree* that “*what I would really like to do is continue living on my own for as long as possible.*” More than nine in ten say they would *pay for services that could help them stay in their own home*, and eight in ten say they would be willing to *give up some of their privacy if they needed help to stay in their home*.

We ask this sub-set of people “What will you need in the next five years to live on your own?” Their answers either reflect what we already know (the need for health and financial security) or identify new ideas such as “having things stay the same”, or a sense of uncertainty. The ones who want things to stay the same say they are relying on “a lot of luck”, “a good attitude”, and “hope”. Given this glass half-full attitude, most say they do not need to make any changes to their home in the next five years. Another group says “I hope I don't have to make any changes in the next five years.” Uncertainty about the future is reflected in comments like: “I have a foggy crystal ball” and “I genuinely don't know what I'll need . . . I wish I did”

¹ We tried to keep question re-wording to a minimum to allow comparisons over-time. Where questions have been revised, we have noted the revisions in the text with an asterisk, and in the text of the appendices.

Social Connectedness and the Personal Computer

Family members are important social contacts for people 65+. Two-thirds of the 65+ population currently use personal computers to communicate with family and friends by e-mail and half search for health information on-line. Awareness of technology to see, hear, and communicate with others has significantly increased since 2007 (52% to 71%). While the willingness to use a personal computer to search for health information is still strong, it has decreased since 2007 (84% to 73%). This means that in 2007 eight in ten people 65+ or approximately 30 million people would use a personal computer to search for health information. By 2010 about seven in ten people 65+ or approximately 29.4 million would do the same. Based on these two points in time the proportion as well as the absolute number of people 65+ who would use a personal computer for this purpose declined.²

Willingness to use a personal computer for other purposes we asked about has remained stable over this timeframe. Is it possible we have saturated this market?

The benefits of using a personal computer are perceived as saving time (which has remained steady since 2007) and giving their family and friends more peace of mind (which is still perceived as a benefit by the majority of respondents, but its perception as a benefit has significantly decreased since 2007).

Given the growth in awareness and the stability in willingness to use personal computers, perhaps we have reached a saturation point with the use of personal computers and should look to other areas for opportunities.

Home Safety Technology Devices and the Potential for Independence

Less than one in five people 65+ currently use a home safety technology device we asked about. Some of the devices we asked about appear to have market potential.

- More than half of the respondents have heard or read about an alarm that could tell them when a door or window has been opened or closed when not expected, and sensors that can be placed in homes to detect if someone falls and calls for help. Nearly as many would be willing to use them if they were available. The willingness to use sensors that can be placed in homes to detect if someone falls and call for help has significantly increased since 2007 suggesting a potential market opportunity.
- Among the remaining three home safety technology devices we asked about, awareness was lower than the willingness to use these items if they were available. This suggests that once people 65+ become aware of these items, they may be willing to use them. These are:

² In 2007 84% of the population 65+ (37,864,355) = 31,806,058. In 2010 73% of the population 65+ (40,228,712) = 29,410,759.

- Small electronic devices that can turn off appliances (such as stove) when not in use, turn lights on and off as needed, regulate the temperature. The market estimate for these devices is 48% of the 65+ population or approximately 19.3 million people. Based on our data most are willing to pay \$50 or less. Using this price point, the estimated market is approximately \$950 million.³
- A device in the kitchen that keeps track of where you are in the process of preparing food so that if you are interrupted it can remind you of the steps you have already completed. The market estimate for these devices is 27% of the 65+ population or approximately 10.8 million people. Based on our data most are willing to pay \$50 or less. Using this price point, the estimated market is approximately \$543 million.⁴
- An electronic system that lets a family member or friend know if you are okay, or if your usual daily routine changes suggesting you might need help (such as getting out of bed as usual). The market estimate for these devices is 46% of the 65+ population or approximately 18.5 million people. Based on our data most are willing to pay \$50 or less. Using this price point, the estimated market is approximately \$925 million.⁵

Almost eight out of ten people 65+ say using these devices would help them feel safer. Almost eight out of ten say using these devices would give their family and friends more peace of mind and seven out of ten say they would allow them to have more personal peace of mind. However, the cost to install and maintain these devices is a potential barrier for about three-fourths of the 65+ population.

Use and Willingness to Use Personal Health and Wellness Technology

Less than one in ten people 65+ currently use any of the personal health and wellness technology devices we asked about. Awareness of three items (bulleted below) increased since 2007. Although willingness to use these items declined since 2007, willingness to use is still higher than awareness in the current study for the following three personal health and wellness items:

- An electronic pill box that reminds you when to take your medicine and which medicine to take. The market estimate for these devices is 29% of the 65+ population or 11.7 million people. Based on our data most are willing to pay \$50 or less. Using this price point, the estimated market is approximately \$583 million.⁶

³ 48% of 40,228,712 = 19,309,781 x \$50 = \$950 million (would pay ≤ \$50 per month). See Appendix C.

⁴ 27% of 40,228,712 = 10,861,752 x \$50 = \$543 million (would pay ≤ \$50 per month). See Appendix C.

⁵ 46% of 40,228,712 = 18,505,207 x \$50 = \$925 million (would pay ≤ \$50 per month). See Appendix C.

⁶ 29% of 40,228,712 = 11,666,326 x \$50 = \$583 million (would pay ≤ \$50 per month). See Appendix C.

- An electronic pill box that does the same thing as the item above and shows a health care provider you have taken your medicine as planned. The market estimate for these devices is 20% of the 65+ population or 8 million people. Based on our data most are willing to pay \$50 or less. Using this price point, the estimated market is approximately \$402 million.⁷
- Personal health system that lets you send medical information such as your blood pressure readings or diabetes results to a medical professional and allows you to have a video conference with them. The market estimate for these devices is 25% of the 65+ population or 10 million people. Based on our data most are willing to pay \$50 or less. Using this price point, the estimated market is approximately \$502 million.⁸

Given consumers' cost concerns, the two electronic pill box items may have greater market potential than the personal health system with video conferencing.

Expectations and Available Budget for a Combination of Technology to Meet Needs

For the first time we asked a question about what respondents would expect to pay for a combination of technology that could enable them to live independently. A small proportion, less than one in ten people 65+, say they would pay nothing. The rest are evenly spread across different price ranges. About one in five say they expected to pay \$1 to 49, \$50, \$51-\$100 or over \$100 per month.

The estimated monthly budget available to spend on technology devices are distributed differently. One in five says they have nothing to spend on a combination of devices that would enable them to live independently. Four in ten say they have less than \$50 per month available, one-quarter have \$50 to \$99 per month, one in ten have \$100 to \$199 and few have over \$200 a month to spend on this budget item.

Consequently, cost to install and maintain devices will need to be addressed. It will be important to select items that people 65+ are receptive to and to keep the costs within their budget range if they are to be adopted so that they can contribute to the health and well-being of this population.

Recommendations

- Accept the fact that many people 65+ do not know what their future holds, and that this uncertainty leaves them at a loss when trying to prepare or plan ahead.
- Recognize that older adults do face considerable uncertainty regarding their health and their finances.

⁷ 20% of the 65+ population or 8,045,742 x \$50 = \$402 million (would pay ≤\$50 per month). See Appendix C.

⁸ 25% of the 65+ population or 10,057,178 x \$50 = \$502 million (would pay ≤\$50 per month). See Appendix C.

- Find ways to help older adults identify signs that may indicate the need for adjustments to their lifestyle or to their home to create smooth transitions rather than disruptive crises. For example, regular eye exams can help detect changes in vision which can affect safety on the stairs or while driving. Another example is having balance checks to determine whether the lack of stability creates a potential for increased risk of falling. These seem like reasonable suggestions that are precursors to needing any technological devices to detect falls.
- Memory checks are another illustration that can influence one's ability to remember when and what medications need to be taken to maintain one's health. Dealing with these issues may mean helping older adults process their denial of changes in personal status and willingness to make lifestyle adjustments.
- Consider whether the personal computer market has been saturated and reached its natural limits for this group.
- Address home safety needs associated with alarms that can indicate when a door or window had been opened unexpectedly.
- Focus more attention on the use of small electronic devices that can regulate the home environment for safety (turn stove off when not in use), convenience (turning lights on and off automatically), and comfort (regulating the temperature). Such home devices appeal to people 65+ and are potentially affordable.
- Focus more attention on medication management devices which were well received by this group and are potentially affordable.

Executive Summary and Recommendations for “Caregivers” 45 to 75

Introduction: What Problems do “Caregivers” Want Help Solving?

A primary goal of this research was to replicate some of our earlier work in the area of the use of technology to support independent living and add new areas of exploration.⁹ What is new, and potentially actionable for providers, is that caregivers say they are in communication with other caregivers like themselves on a regular basis.¹⁰ Their communication has the characteristics of an informal network that provides emotional support as well as problem-solving functions. With the right approach, AARP should be able to tap into this informal network and be even more relevant as a resource for “caregivers” and the people they help. As we do this, we need to find creative ways to talk to people who are helping their mother, another relative, or a friend instead of talking about “caregiving” because two-thirds of caregivers do not consistently identify as caregivers.¹¹

They do identify with three problems they face as a “caregiver,” and these *are* problems they say they *need help solving* namely, managing their time, managing their finances, and dealing with emotional and communication issues. The order of these problems shift depending on whether we look at what they say is their number one problem, number two problem, or number three problem. Nonetheless, people who are 45 – 75 years of age, and provide assistance to someone 50+ say they need help with:

- Managing their time such as:
 - How can I find time for myself and take care of my mother?
 - How can I spend more time with my mother without sacrificing my own life, work, or disrupting my own family?
 - How do I set appropriate boundaries without feeling guilty, hurting my mother or feeling exhausted?
- Managing finances such as:
 - How am I going to find the money to pay for . . . ?
 - How do I work through the government bureaucracy, or insurance company, to find out what services my mother is eligible for?
 - How am I going to find the money to pay for . . . ? (repeated for emphasis)

⁹ Some findings are familiar to those in this field, e.g., the majority of caregivers (72%) say the people they help live in their own homes.

¹⁰ Perhaps caregivers who do not self-identify place a higher value on other roles in their lives when defining their identity. This is supported by the fact that seven in ten know others who provide similar assistance and three-fourths are in contact with these people on a regular or as needed basis. They provide emotional support and problem-solving support. They most often communicate by telephone (73%), less often have in-person visits (60%), and sometimes communicate through the Internet (18%) or social networking sites (5%).

¹¹ One-third (32%) of caregivers self-identify, one-third (33%) do not self-identify as a caregiver and 36% sometimes see themselves as a caregiver.

- Resolving emotional and communication issues associated with their care recipient, their family, service providers, and themselves such as:
 - How can I get my mother to cooperate with me?
 - How can I get other members of my family, like my brothers and sisters, involved in helping our mother (or trusting me to do it)? and
 - How do I deal with my own emotions and self-doubt?
 - How do I communicate with the agency so they understand our needs?

Underlying themes:

- How do I know when it is time to get more, or different, help for my mother (as she moves through transitions)?
- What do I need to look for in her behavior that will tell me when the time is right?
- Where do I go to find appropriate and compassionate services for her when she really needs them?
- And, of course, the bottom-line is, how do we pay for it?

When we asked “caregivers” what it would be worth to them to solve these problems, their responses covered a wide-range from being worth “nothing” to being “priceless” regardless of the issue area. A fuller description of their opinions is provided in the detailed section of this report.

It is our hope that the insights from this study can provide ideas about how we can help people 45 to 75 who care for someone 50+ meet their own personal needs, as well as the needs of the person they assist, by identifying technological devices that can help them save time, be affordable, and improve communication among family members.

Social Connectedness and the Personal Computer

The majority of caregivers currently use a personal computer to communicate with others and find health information on the Internet. With the exception of one activity, we found considerable stability among caregivers’ awareness and willingness to use a personal computer to perform the tasks we asked about in 2007 and 2010. The exception is the substantial drop in the proportion of caregivers who are willing to use a personal computer to help find or coordinate services for the person she/he provides care (from 74% in 2007 to 56% in 2010). It is possible that the decline in the U.S. economy leaves caregivers, like other Americans, with fewer resources to pay for discretionary goods and services. Without the resources to pay for discretionary goods and services, why spend time looking for them?

The majority of caregivers perceive benefits associated with using a personal computer in 2010, such as:

- 74% believe a computer will *save me time*,
- 69% believe a computer will *give peace of mind*,
- 69% make the person I help feel safer.

Roughly half perceive barriers either for themselves or the person they assist such as:

- 52% believe it will not be available to the person they help
- 50% believe it will cost too much to install
- 48% believe it will cost too much to maintain

It is possible that, like the survey of people 65+, we have reached a saturation point regarding the use of personal computers among caregivers. This is supported by the finding that the proportion of caregivers who *strongly agree* they want 24 hour a day, 7 day a week customer service representatives available to them if they have a problem has dropped from 41% to one in four (26%). Furthermore, caregivers show remarkable stability in the amount they are willing to pay for a personal computer to stay in touch with others (less than \$50 per month), and their perception of the amount of difficulty they think they will face in persuading their care recipient to use a personal computer. Half believe they would face *a great deal of difficulty* trying to get the person they help to use this technology.

Home Safety Technology Devices and the Potential for Independence

A minority of caregivers, less than one in five, say the person they help currently uses the home safety technology devices we asked about. Willingness to use three devices exceeds awareness for three technologies indicating a potential unmet need for:

- An alarm that could tell someone when a door or window has been opened or closed when not expected. Estimating the market size for caregivers is more complex than for the 65+ population, because we do not have U.S. Census data to estimate the number of caregivers in the target population.
- Small electronic devices that can turn off appliances (such as a stove) when not in use, turn lights on and off as needed, or regulate the temperature.
- A device in the kitchen that keeps track of where an individual is in the process of preparing food so that if she is interrupted it can remind them of the steps they has already completed.

The trend analysis also shows increased willingness to use sensors that can be placed throughout the home to detect if someone falls and, if so, calls for emergency help (an increase from 60% in 2007 to 67% in 2010). There has also been a significant increase in the proportion of caregivers who would be willing to use the food preparation tracking device (from 35% in 2007 to 41% in 2010). The qualitative analysis showed some caregivers face concerns about food, ranging from getting the person they assist to eat anything, eating nutritional food, finding things they will eat, or knowing if they will eat when the caregiver is not there. While we can understand why a device that tracks the steps in preparing food might be appealing to these caregivers, it may not solve the underlying problem of getting the person to eat. Perhaps a new engagement device needs to be created that could make eating a social experience especially for those who live alone, have low incomes, have emotional problems or take prescription medications that diminish their appetite. Another option would be to create something to provide incentives to the individual for eating the right food.

All of these home safety technology devices could be considered passive technology in that the caregiver and recipient do not have to actively do anything to use these items with the exception of having them installed and turning them on. This could be a benefit we did not ask about, but one that would be appealing to both parties.

There was stability among the perceived benefits and barriers between 2007 and 2010. More than eight in ten caregivers identify the top benefits of using home safety technology devices as emotional:

- 84% say they will *make the person I help feel safer*.
- 80% say they will *give me more peace of mind*.
- 69% say they will *give the person I help more peace of mind*.

The perceived barriers to use continue to be cost related (*cost too much to install* 74% or *cost too much to maintain* 73%), the potential for being stigmatized (61% say they will *make care recipient look like they need assistance*), half (50%) say they will *be difficult to learn how to use*, and half (49%) not being needed by the care recipient. The only significant difference is that caregivers are less likely to think these devices will save them time (a decrease of seven points from 65% in 2007 to 57% in 2010.) Notably, a majority of caregivers continue to think these devices will save them time.

Fewer caregivers strongly agree that it would be important to them to have a customer service representative available by telephone 24 hours a day 7 days a week (49% in 2007 vs. 40% in 2010). More than eight in ten caregivers would be willing to pay \$50 or less per month for these devices, and there was stability in the proportion of caregivers who think they will have difficulty persuading their care recipients to use these devices.

Use and Willingness to Use Personal Health and Wellness Technology

About one in five caregivers say the person they help currently uses a PERS (personal emergency response system 19%). Less than one in ten say their care recipient currently uses any of the other health and wellness devices we asked about.

Although caregivers' willingness to use any of these devices significantly declined since 2007, three items show higher proportions are willing to use them than were aware of them in 2010 (see Figure 18). This suggests some market potential for the following:

- *An electronic pill box that reminds the person they provide care, when to take her medicine and which medicine to take.*
- *An electronic pill box that does the same thing as the item above and also shows a health care provider if the person you provide care for has taken their medicine as planned.*
- *A personal health system that lets people send medical information about themselves (like their blood pressure readings, weight, or how their heart is performing) from their home to a health professional, but has a screen and allows you to have a video conference with your health care provider.*

Given the regular use of prescription drugs and the potentially modest cost of electronic devices to help with medication management, these devices hold greater potential than a personal health system that lets people send medical information about themselves.¹²

While the third bulleted item above could have many benefits, given the amount caregivers can afford, this item is not likely to be successful in the market place unless the cost is \$50 or less per month.

Although the majority of caregivers perceived positive benefits associated with using these devices, the proportion of caregivers who *strongly* or *somewhat agreed* with the benefits declined since the last survey. For example, agreement declined for the benefits of making the caregiver *feel the person they help is safer, giving them more peace of mind, saving them time, and giving them more freedom*. It is notable that the perceived cost of installing and maintaining these devices also declined even though a majority of caregivers still see costs as a concern.

¹² Roughly three in ten say the person they help takes one to three prescription medications per day, four or five prescription medications per day, or six or more prescriptions medications per day. Based on other research we have conducted, we know that on average older adults take four prescription medications daily. Among our sample of people 65+ most say they do not have any difficulty remembering to take their medications. However, more than one in ten (14%) say they have at least some difficulty remembering to take their medications.

Caregivers are less dependent on round-the-clock customer service representatives in 2010 than in 2007. While they continue to only be willing to pay \$50 or less per month to make these devices available to the person they help, a higher proportion believe they will have a *great deal of difficulty* persuading their care recipient to use these devices. These viewpoints suggest that the most basic personal health and wellness devices, such as the electronic pill boxes, have the best chance of being accepted by caregivers.

Expectations and Available Budget for a Combination of Technology to Meet Needs

We added two new questions to this iteration of Healthy @ Home to better understand how much people expect to pay for the entire set of technologies we asked about, and how much budget they have for this set of items. First, we asked respondents to think about all the categories of technology we asked about including a computer to maintain contact or get information, home and safety technology devices, and personal health and wellness items. We acknowledged that each of these technologies has a cost (which we asked about separately) and asked if some combination of these technologies could enable them to live independently, how much would they expect to pay for them all together in total per month.

The results show that caregivers expect to pay more for a combination of devices to meet their care recipients' needs but have less than \$50 per month or nothing to pay per month in their budget.

Recommendations

- Stop calling people who assist those 50+ “caregivers”. Instead, appeal to them in other life roles, or AARP segments, and address their needs helping family, friends, or themselves with managing their time, managing their finances, and resolving emotional or communication issues. Recognize that family relationships can have a dark side which emerges under the stress of caring for an older adult.
- Identify ways to help “caregivers” determine when the person they help is moving to a new level which may require more help, or different types of help.
- Consider whether the personal computer market has been saturated and reached its natural limits for “caregiving” purposes.
- Address the home safety needs associated with alarms that can alert a caregiver when a door or window has been opened unexpectedly, perhaps indicating that the person they assist is wandering out of their home environment.
- Focus more attention on the use of small electronic devices that can regulate the home environment for safety (turn stove off when not in use), convenience (turning lights on and off automatically), and comfort (regulating the temperature). Such home devices appeal to “caregivers” and help them meet the needs of the person they help. At the same time, they are potentially affordable.

- Develop ways to address caregivers concerns about different types of food issues they have with the people they assist.
- Focus more attention on the use of technology to help caregivers with scheduling and time management.
- Medication management is another frequently mentioned need and the electronic pill boxes we asked about were well received and potentially affordable.
- Grapple with the issue that finances are often a problem for “caregivers” and the people they assist. Focusing on their underlying needs may require us to re-think the types of technologies that are being developed and whether or not they will meet the “caregivers” perceived needs and fit within their budget.

Methods

It is important to remember the context in which these data were collected. The first wave of data was collected in the fall of 2007 before the recession hit the U.S. economy in 2008. While we are beginning to see some indications of economic recovery, we continue to have an unemployment rate of approximately 9 percent, an on-going mortgage foreclosure problem, and escalating health care costs. While many of the respondents in this survey are directly impacted by some of these forces, others are indirectly impacted and see the consequences for the younger generation of their family on a regular basis. Under this set of conditions, it is gratifying to find that much of our data supports the findings of the earlier study.

Companion surveys were designed for this study, one survey for adults age 65+ (n=940) and one for caregivers 45-75 years (n=1,152) who provide assistance with activities of daily living or instrumental activities of daily living. Data were collected between November 22 and November 29, 2010 by Knowledge Networks. New questions were added and some were deleted from this wave of data collection. Some questions were updated for this wave of data collection. Notations appear throughout the text when question wording changed. In most cases, the changes were small and probably did not affect outcomes. In other cases the changes were more substantial and may influence the results. A detailed methodological report appears in the appendices of this report along with annotated questionnaires.

Reading this report

The figures in this report are designed to present descriptive data from the current wave of this study alongside a mini-table containing trend data comparing data collected between December 7 and December 18, 2007. Statistical significance is reported at the 95% level of confidence in the text and in the tables (signified by capital letters identifying the table cell which is significantly different). When a lower case letter appears, it indicates the findings are significant at the 90% level of confidence). Data in tables and figures may not add to 100% as a result of rounding.

I. Detailed Findings: Profile of Older Adults 65+

The profile of older adults age 65+ in this study shows that (Figure 1):

- The range in age is from 65 years to 94 years, and their mean age is 74 years.
- More than half of the respondents are female (57%) most are White, non-Hispanic (80%).
- About half the respondents report being married (49%).
- Approximately one-quarter have graduated from college, or have done post-graduate work (24%). More than one-third (36%) say their highest educational level was completing high school or earning a GED.
- The mean income for this group \$44,380 in the past year before taxes. Few are working (13%).
- Respondents tend to rate their health high, and few report difficulties with activities of daily living (ADL) or independent activities of daily living (IADL). The vast majority of respondents 65+ report it is *somewhat difficult* or *not at all difficult* to perform ADL's such as getting in and out of bed (99%), going up or down stairs (91%), remembering to take my medication (95%). The ability to perform ADL's did not vary by age or vary between 2007 and 2010. With one exception, the same patterns hold for IADL's. The exception is that a greater proportion of people 75 to 84 years old say they *cannot do alone* or find it *very difficult* to arrange or supervise services from an agency, such as nurses or aides than people 65 to 74 years (9% vs. 3%).
- Yet, some still have difficulty performing basic activities or have impairments that could limit the quality of their lives or their ability to be independent.
 - One-third (32%) report low vision or hearing impairments,
 - More than one-quarter (27%) report having limits on one or more basic physical activities such as walking, climbing stairs, reaching, lifting or carrying.
 - About one in ten (13%) report problems learning, remembering or concentrating.

Figure I: Proportion of 65+ by Age and Selected Characteristics

Item	Total 2007 A (n=907)	Total 2010 B (n=940)	Age 65-74 2010 C	Age 75-84 2010 D	Age 85+ 2010 (base too small)
Mean age	74	74	69	79 C	87
% by category	100	100	57	43	
Gender					
• Female	57%	57%	53%	63% c	52%
• Male	43%	43%	47% d	37%	48%
Race / ethnicity					
• White, non-Hispanic	81%	80%	80%	81%	81%
• Ethnic (net)	19%	20%	20%	19%	20%
Marital status					
• Married	63% B	49%	56% D	40%	35%
• Single	3%	7% A	9% d	5%	-
• Divorced	9%	16% A	17%	14%	30%
• Widowed	24%	27%	16%	42% C	36%
• Separated	1%	1%	2% D	-	-
Health status					
• Excellent/good	73%	77%	78%	77%	73%
• Fair/poor	26%	22%	22%	23%	27%
• Low vision or hearing impairment	39% B	32%	26%	37% C	64%
Limits on one or more basic physical activities such as;					
• walking, climbing stairs, reaching, lifting or carrying	34% B	27%	25%	30%	48%
• Problems learning, remembering or concentrating	15%	13%	10%	16% c	31%
% with median income	35	36	38	32	33
Education					
• College degree or post-graduate education	21%	24%	24%	23%	27%
• HS grad or GED	37%	36%	33%	41%	8%
Employment – working	12%	13%	18% D	8%	-
Residence – own	84%	84%	84%	83%	85%
• Rent	12%	15%	14%	16%	14%

Source: Healthy @ Home, 2008, AARP, Healthy @ Home 2.0, 2011, AARP.

A capital letter indicates that the percentage in the table is significantly different from the percent listed in the column labeled with that capital letter at the 95% level of significance. A lower case letter indicates the percentage in the table is significantly different from the percent listed in the column labeled with that letter.

2007-2010 Trend Analysis

The proportion of single people has increased (3% in 2007 vs. 7% in 2010) and the proportion of those divorced has nearly doubled (9% in 2007 vs. 16% in 2010).

There are no significant differences in self-reported health status. However, the proportion who report low vision or hearing impairment, or a condition that limits one or more basic physical activities decreased by seven points each (39% vs. 32% and 34% vs. 27%, respectively).

II. What Do People 65+ Want?

We asked older adults a series of three questions about their desire for future independence and their willingness to make compromises to achieve such independence. Almost all (96%) of adults 65+ in this study *somewhat agree* (7%) or *strongly agree* (89%) with the following statement “What I’d really like to do is continue living on my own for as long as possible.” It is impressive to note that nearly nine in ten strongly agree with this sentiment.

We asked this sub-set of respondents “What will you need in the next five years to live on your own?” The qualitative responses fall into several categories. The most frequently mentioned responses were:

- Good health (physical and mental). For example, “my health to stay good,” “continued good health,” “eyesight, brain power, and just maybe more money.”
- More money, better return on investments, increase in Social Security, increased income, or just more money. For example, “finances to support myself, a clear mind, and continued good health,” “more money from Social Security,” and “enough money to see me through the next five years.”
- It is surprising that a fair share said “nothing”, to “have things stay the way they are”, or that they simply “don’t know”. For example, one woman said “I have a foggy crystal ball.” In addition, several mentioned that along with this they need “a lot of luck,” “a good attitude”, and “hope”.
- My spouse. Several emphasized they needed their spouse and if they had their spouse everything would be okay. Others seemed to be indicating they would like a spouse, perhaps to help handle situations life brings. Only one person said she needed her spouse to die so that she could go on with her life.
- Help with the house – especially with heavy work. Inside the house they need help with things like doing the laundry and cleaning. Outside they need help with maintenance. Some already receive services for both types of assistance within and outside the home.
- Transportation was another issue that emerged as a need.
- Many said “nothing”, a few said they had planned and noted they have several sources of retirement income.

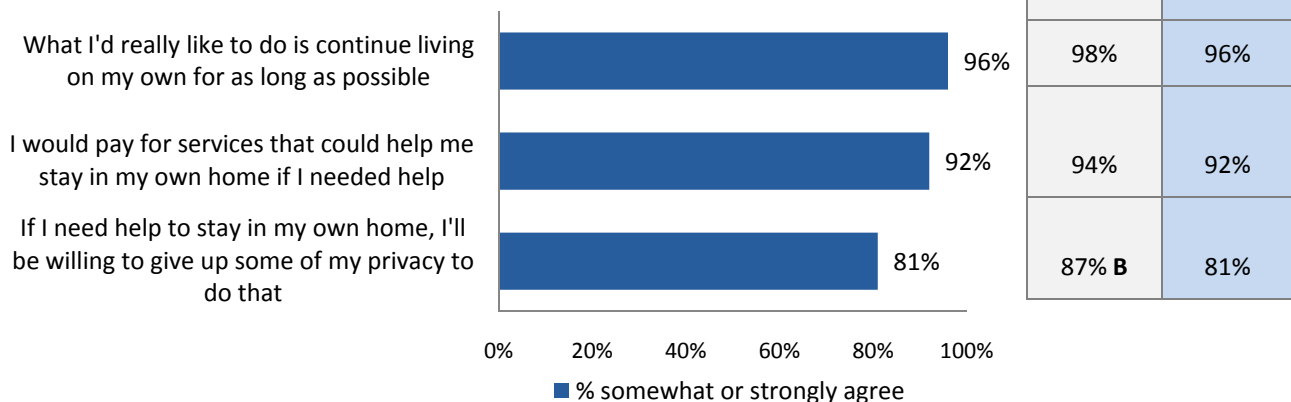
We also asked this group (who *somewhat* or *strongly agree* they want to continue living on their own for as long as possible): What changes, if any, will you need to make to your home to live on your own in the next five years?

- Roughly half said they do not need any changes to their home. Roughly a quarter of these people said hopefully they would not need to make any changes. Roughly one in six said they did not need any changes on the condition that they don't develop an unanticipated health problem. A small proportion said they did not know about any changes, or wished they did know what they might need.
- About one in ten mentioned something specific they would change such as installing grab bars in the bathroom or raising the toilet seats. Moving the laundry facilities from the basement upstairs was also mentioned by several people as was replacing outside stairs with a ramp and replacing indoor steps with an elevator or chair lift.
- Few mentioned moving or downsizing. A few said they had already planned ahead to have a home environment that they thought would meet their needs such as moving to a senior living community or having a bedroom and bathroom on the main level of their home.

The vast majority (92%) *somewhat agree* or *strongly agree* that they would be willing to pay for services that could help them stay in their own home if they needed help, and eight in ten (81%) *somewhat agree* or *strongly agree* that if they needed help to stay in their own home, they would be willing to give up some of their privacy to do that (Figure 2).

Figure 2: Desire for Independence and Willingness to Make Compromises to Achieve Independence

Q3a-c: Please indicate how much you agree or disagree with the following statements:



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP.
Base: 2010 all respondents 65+

2007 to 2010 Trend Analysis

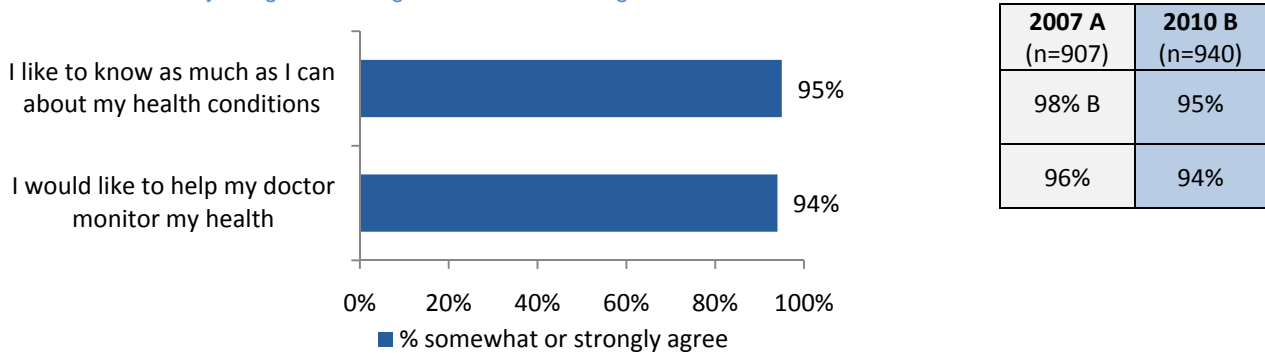
The proportion of people age 65+ who want to continue living on their own for as long as possible remained strong and steady over the past three years as did the willingness to pay for services that could help them stay in their own home if they needed help to do so.¹³ However, while the willingness to trade-off some of their privacy to remain in their own home continued to be high, it dropped from nearly nine in ten in 2007 (87%) to about eight in ten in 2010 (81%).¹⁴

III. Willingness to take Responsibility for Health

More than nine in ten (95%) people age 65+ *agree* or *strongly agree* with the statement “I like to know as much as I can about my health conditions, and nearly as many *agree* or *strongly agree* that “I would like to help my doctor monitor my health (94%) see Figure 3.

Figure 3: Health Knowledge and Willingness to Help Doctor Monitor Health

Q3d-e: How much do you agree or disagree with the following statements?



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP.
Base: Respondents 65+

2007 to 2010 Trend Analysis

While the proportion of people who *agree* or *strongly agree* that they would like to know as much as they can about their health conditions remains strong, it has decreased three points (98% in 2007 vs. 95% in 2010).¹⁵

¹³ The proportion of respondents who *strongly agree* with the statement “I would pay for services that could help me stay in my own home if I needed help” dropped nearly 16 points from 61% to 46% in 2010. However, this was counterbalanced by a increase from in the proportion of respondents 65+ who said they *somewhat agree* which increased 12 points from 34% to 46%.

¹⁴ The proportion of respondents who strongly agree with the statement “If I need help to stay in my own home, I’ll be willing to give up some of my privacy to do that” dropped nine points from 39% to 30%.

¹⁵ While the total proportion who *strongly or somewhat agree* with the statement “I would like to help my doctor monitor my health was relatively stable, the proportion of those who *strongly agree* decreased eight points from 74% to 66% and was somewhat counter balanced by an increase of six points among those who *somewhat agree* from 21% to 28%.

IV. Importance of Family

We asked all respondents how important it is to them to “stay in touch with your family in the next five years”. More than nine in ten (94%) people age 65+ say it is somewhat or *very important* to stay in touch with their family members in the next five years (Figure 4).

Figure 4: Importance of Staying in Touch with Family in Next Five Years

Q3Aw2 How Important is it to stay in touch with your family members in the next five years?

	2010 (n = 940)
Very important	85%
Somewhat important	9%
Not very important	4%
Not at all important	1%
Refused	1%

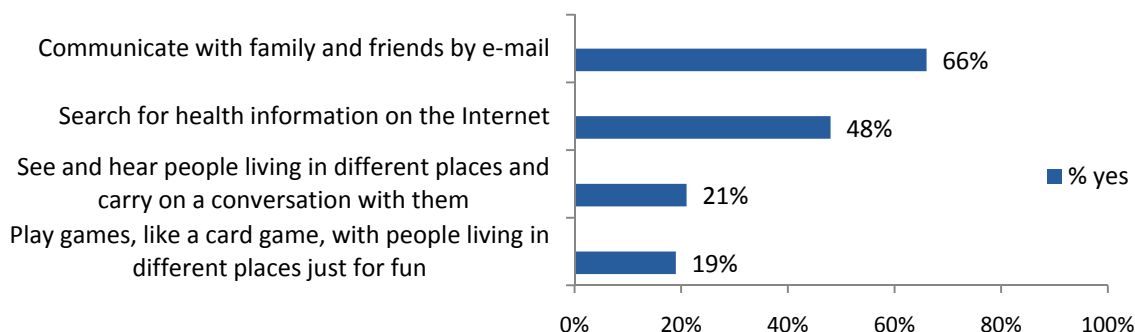
Source: Healthy @ Home 2.0, AARP, 2011
Base: Respondents 65+

V. Current Use of Personal Computers

Three-fourths (76%) of respondents say they currently have a computer in their home.¹⁶ Figure 4 shows communicating with family and friends by e-mail is the most popular computer-based activity among people age 65, with about two-thirds of respondents saying they engage in e-mailing family members and friends. About half of respondents say they currently search for health information on the Internet, but less than one-quarter use a personal computer to see and hear people living in different places and carry on a conversation with them. Nearly as many, one in five, use their computer for fun activities such as playing card games (Figure 5).

Figure 5: Current Use of Personal Computers

Q 8w2a-d: Do you currently use a personal computer to:



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP.
Base: All respondents 65+.

¹⁶ This is a significant increase compared to two-thirds (68%) who say they had a computer in their home in 2007. The proportion of respondents who report having broad-band access has increased nine points from 35% to 44%. The proportion who report using a dial-up service has dropped almost 16 points from 42% to 26%.

Awareness and Willingness to Use Personal Computers

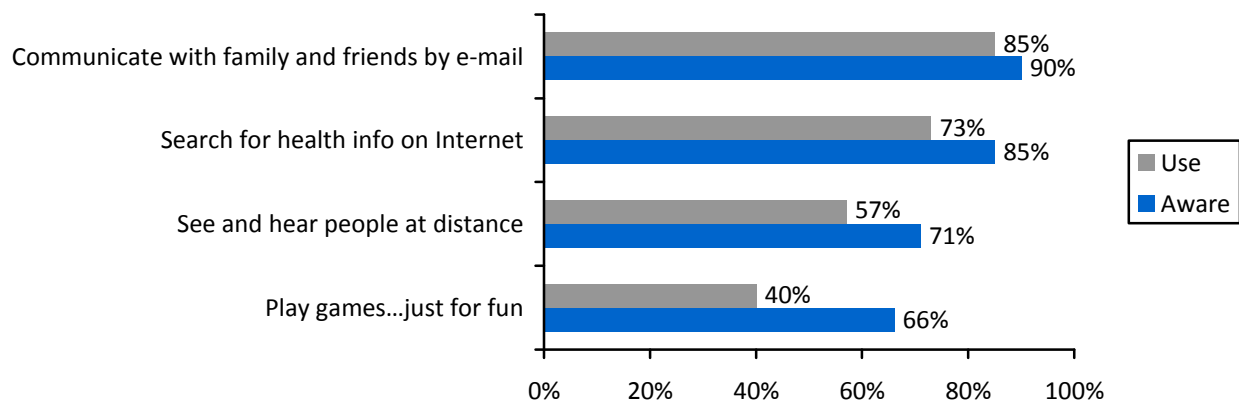
Awareness of using personal computers to maintain contact with the world around them exceeded willingness to use for every category of activity we asked about (Figure 6). Awareness is generally high among the 65+ with a range of two-thirds (66%) to nine in ten (90%) having heard about these activities. The willingness to use a personal computer for these activities ranges from four in ten (40%) to well over eight in ten (85%).

A substantial proportion would be willing to use a personal computer to maintain contact and we already know from the previous question that a varying proportion of the 65+ already engage in these activities. This suggests there may be potential growth in areas such as using a computer for fun activities or to communicate with family members or friends.

Figure 6: Awareness and Willingness to Use Personal Computers to Maintain Contact

Q8a-d.: Have you ever heard or read about using a personal computer to: . . . ?

Q8_1a-d: If this was available, would you use a personal computer to:



AWARENESS: Have you heard or read about:

	2007 A (n=907)	2010 B (n=940)
E-mail family, friends	NA	90%
Search for health information	88%	85%
See, hear, communicate	52%	71%A
Play games	68%	66%

USE: If this was available, would you be willing to use:

	2007 A (n=907)	2010 B (n=940)
E-mail family, friends	NA	85%
Search for health information	84% B	73%
See, hear, communicate	56%	57%
Play games	41%	40%

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP.
Base: All respondents 65+ in order to match the 2007 data for comparison.

2007 to 2010 Trend Analysis

Among people age 65+ the awareness of using a personal computer to see, hear and communicate with those at a distance has increased 19 points (52% to 71%) while the willingness to engage in this activity has remained stable (56% to 57%).

The awareness of the ability to use a pc to search for health information on the Internet has remained stable (88% to 85%) while the willingness to do this has decreased eleven points 84% to 73%).

Perceived Benefits and Barriers

We asked respondents 65+ to rate 15 items that could be perceived as benefits or barriers to using a personal computer to do a variety of activities. Seven of these items are potential benefits, seven are potential barriers and one (not be available to me) is relatively neutral, although it could be perceived as a barrier.

Benefits

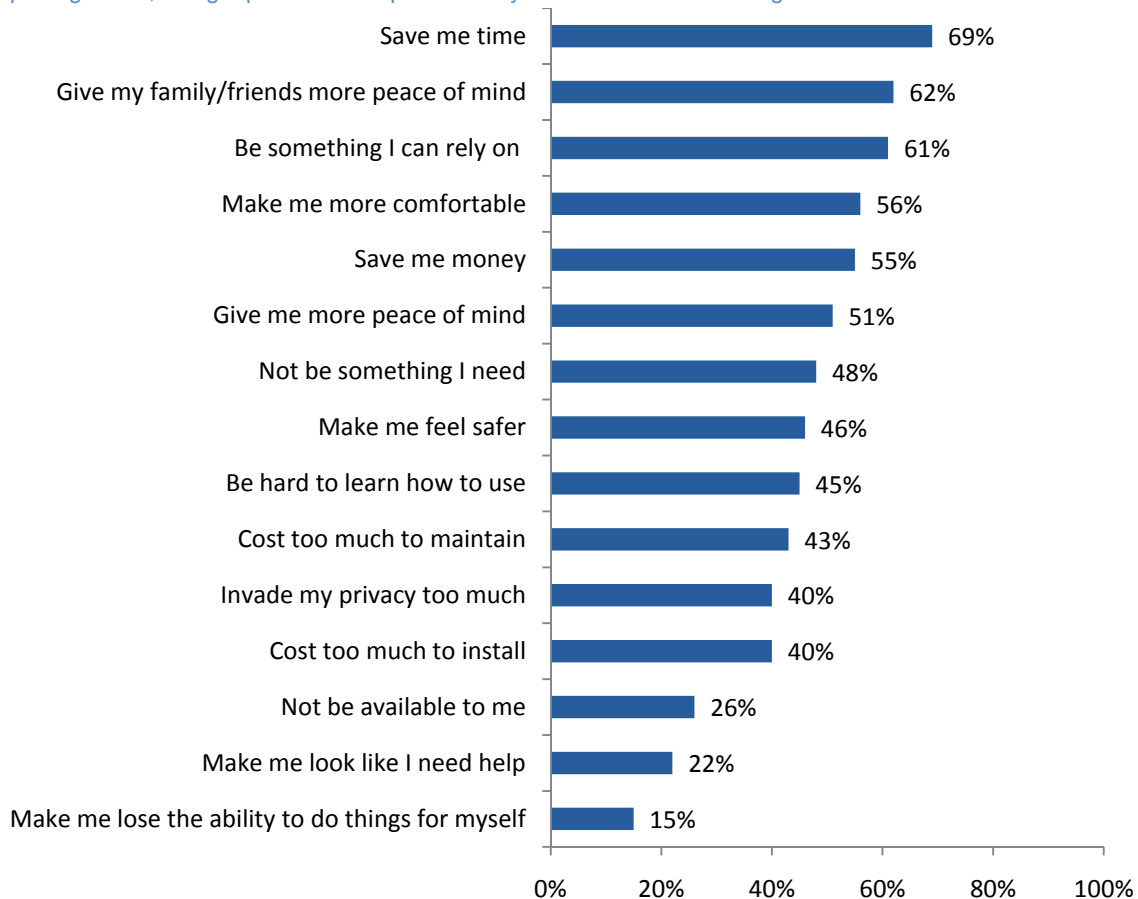
The top six items selected by at least half of the respondents 65+ represent benefits. For example, more than six in ten believe a personal computer will save them time (69%), give family and friends more peace of mind (62%) and be something they can rely on (61%). Other benefits identified by more than half of the respondents include save me money (55%) and give me peace of mind (51%) see Figure 7.

Barriers

Although almost half of respondents (48%) say they might not need a personal computer, respondents were generally less likely to believe using a personal computer to stay in touch with others or get information present barriers to them. For example, fewer than one in four say a personal computer would have a stigmatizing affect (22% say it would “make me look like I need help” and 15% say it would “make me lose the ability to do things for myself). About four in ten are concerned about costs or the lack of privacy.

Figure 7: Perceived Benefits and Barriers Regarding Use of Personal Computers to Stay in Touch / Get Information

Q 9a-q: In general, using a personal computer to stay in touch with others or get information would:



Source: Healthy @ Home 2.0, AARP, 2011
 Base: All respondents 65+

2007 to 2010 Trend Analysis

Benefits

With the exception of one item (save me time), all the perceived benefits of using a personal computer to stay in touch with others or get information decreased between 2007 and 2010 (Figure 8). Despite this decrease, six positive items continued to be rated as *somewhat* or *strongly agreed* upon by at least half of the respondents who see them as benefits. It is possible that people are beginning to take personal computers for granted as the novelty wears off.

Barriers

In addition, all of the perceived barriers of using a personal computer also decreased. For example, less than half are concerned about costs, the invasion of their privacy, or being stigmatized by using a personal computer. This suggests that people might be more willing to use personal computers.

Figure 8: Perceived Benefits and Barriers among the 65+

Q9a-q: In general, using a personal computer to stay in touch with others or get information would:

Perceived Benefits or Barriers	2007 A (n= 907)	2010 B (n=940)
Save me time	73%	69%
Give my family / friends more peace of mind	73% B*	62%
Be something I can rely on	67% b*	61%
Make me more comfortable	67% B*	56%
Save me money	61% b*	55%
Give me more peace of mind	65% B*	51%
Not be something I need	58% B*	48%
Make me feel safer	67% B*	46%
Be hard to learn how to use	55% B*	45%
Cost too much to maintain	59% B*	43%
Invade my privacy too much	47% B*	40%
Cost too much to install	62% B*	40%
Not be available to me	38% B*	26%
Make me look like I need help	35% B*	22%
Make me lose the ability to do things for myself	25% B*	15%

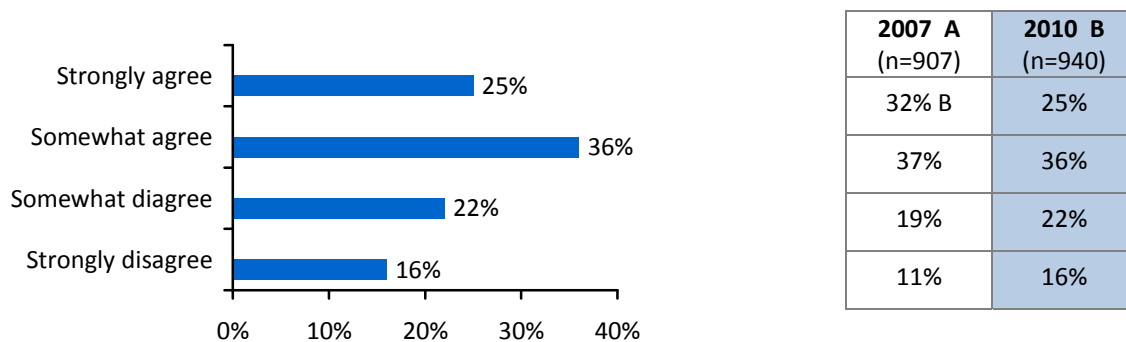
Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP
Base: All respondents 65+

Importance of Customer Service

More than six in ten respondents *somewhat* or *strongly agree* that they want 24/7 customer service available to assist them if they have a problem (Figure 9). Notably a quarter of the respondents *strongly agreed* with this statement.

Figure 9: Importance of Customer Service

Q10: If I used a personal computer to stay in touch with other people, how important is it to have a customer service representative available by telephone 24 hours, 7 days a week to provide assistance if I needed help using it.



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP
Base: All respondents 65+

2007 to 2010 Trend Analysis

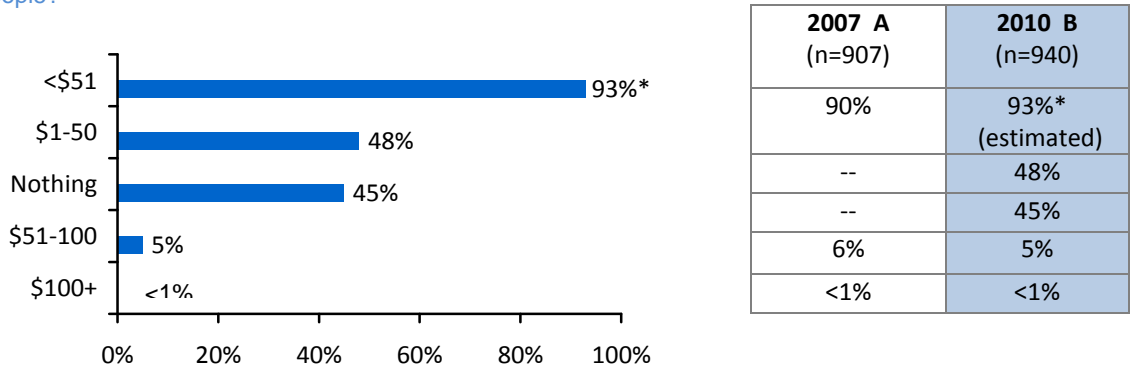
The proportion of people who say they *strongly agree* they want 24/7 customer service by telephone decreased seven points from 32% to 25%. While this may seem counterintuitive, it makes sense from the perspective that awareness of using a computer for a variety of activities has either increased or been stable. Furthermore, with the exception of searching for health information on-line, the willingness to use personal computers for a variety of tasks has remained stable. It is possible that having more experience using personal computers has contributed to a decrease in the need for 24/7 customer service.

Willingness to Pay

We modified the question we asked about willingness to pay for personal computers to strengthen our data so that we would know what proportion of people 65+ are not willing to pay anything for this service (45%). Almost half (48%) are willing to pay between one dollar and \$50 per month. Combining these two figures, we estimate that about nine in ten people are willing to pay \$50 or less per month. Few are willing to pay more than fifty dollars per month (Figure 10).

Figure 10: Willingness to Pay for Personal Computer to Stay in Touch with Others

Q. 11. Overall, how much would you be willing to pay per month to use a personal computer to stay in touch with other people?



Source: Healthy @ Home, 2008 and Healthy @ Home 2.0, 2011, AARP.
Base: All respondents 65+

* (note: in 2010 we sub-divided the <\$50 category into two groups, those who would pay nothing and those who would pay \$1-50 and these categories were summed to get an estimate of the proportion willing to pay <\$50.)

2007 to 2010 Trend Analysis

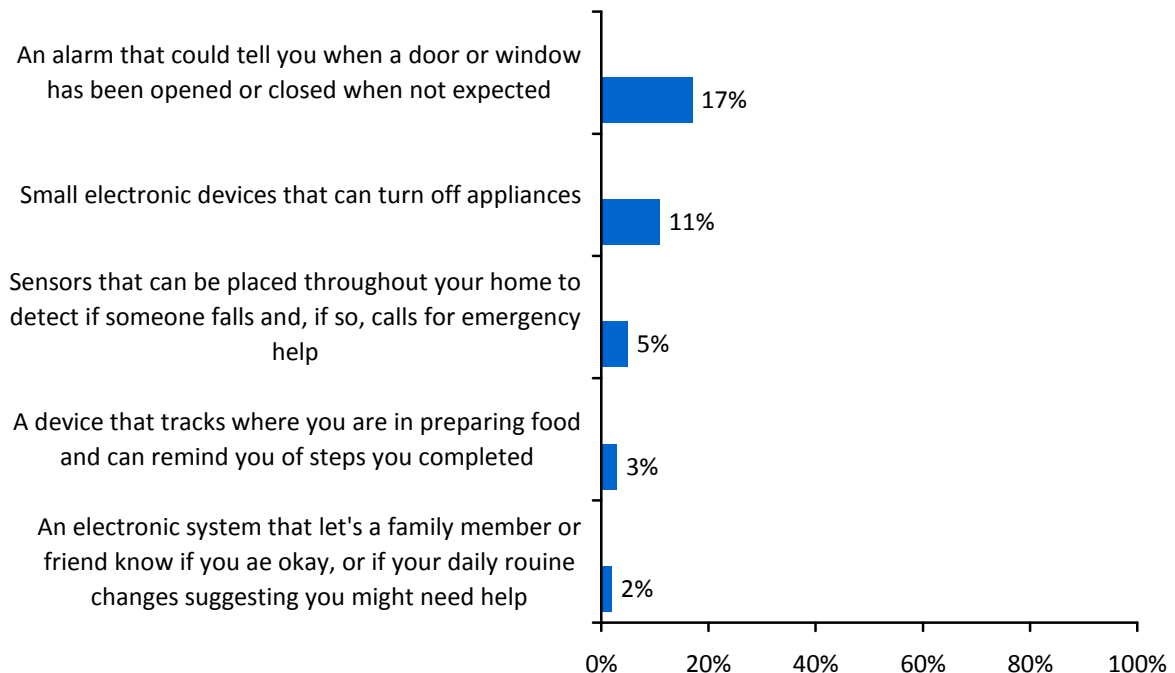
The willingness to pay for this service has remained stable with no change in the percentages who are willing to pay \$50 or less or \$51 to \$100 per month.

VI. Current Use of Home Safety Technology Devices

A minority of people age 65 currently use home safety technology devices (Figure 11). Less than one in five currently use “an alarm that could tell you when a door or window has been opened or closed unexpectedly”. About one in ten use small electronic devices that can turn appliances off or regulate the environment. Even fewer currently use the remaining home safety devices we asked about.

Figure 11: Proportion of 65+ Who Currently Use Home Safety Devices

Q12w2a-e: We would like to know about your experience with some home safety technology devices? Do you currently use any of the following? (slightly modified technology descriptions)



Source: Healthy @ Home 2.0, AARP, 2011
Base: All respondents 65+

Awareness and Willingness to Use

More than half of respondents say they are aware of two technology devices, an alarm that could tell them when a door or window was unexpectedly opened or closed (65%) and sensors that can be placed in a home to detect if someone falls (52%) see Figure 12. About four in ten are aware of small electronic devices that can turn off appliances and regulate the environment (42%) and an electronic system that lets your family know you are okay (40%). Less than one in five (17%) were aware of a device that tracks the steps in food preparation and can remind you of the steps you have completed if you are interrupted.

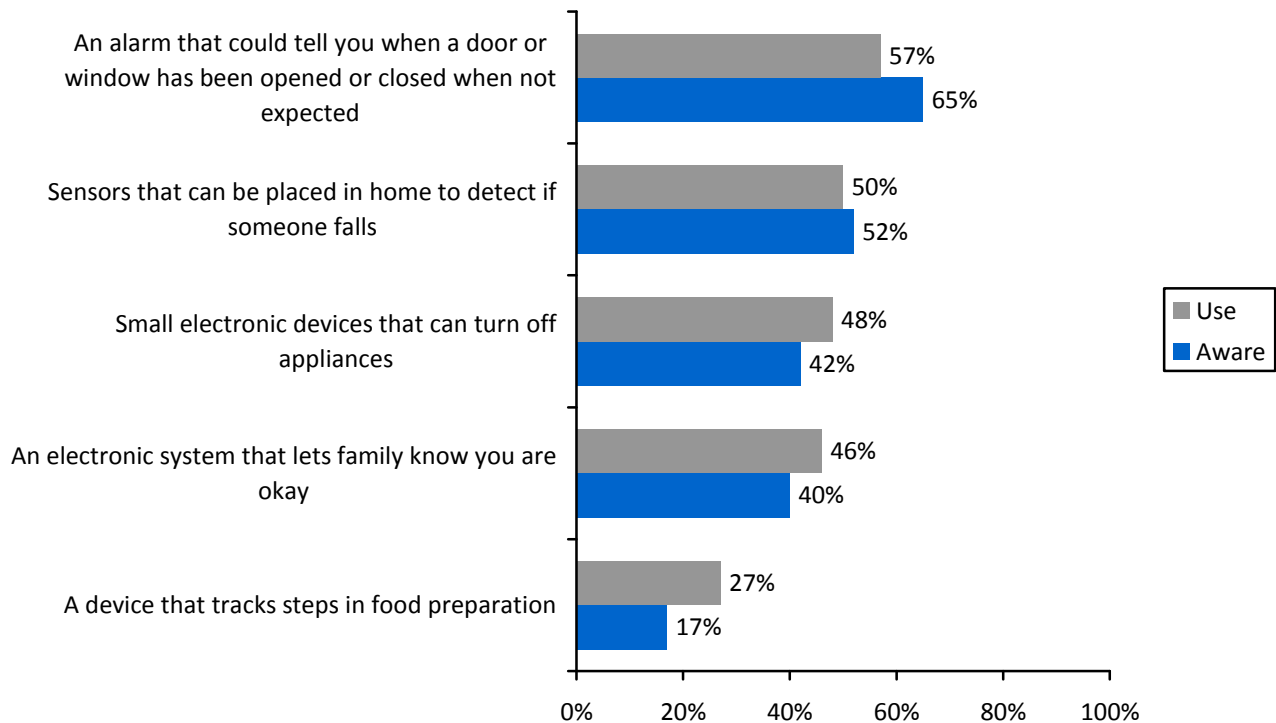
At least half are willing to use the alarm that could tell them when a door or window has been opened or closed when not expected (57%) and sensors that can be placed in the home to detect if someone falls and calls for help (50%). Willingness to use these items is somewhat lower than the level of awareness among the 65+.

For the remaining three items, willingness to use exceeds level of awareness. Almost half of the 65+ are willing to use small electronic devices that can turn off appliances and regulate the environment even though fewer were aware of these items before the survey (48% vs. 42%). Similarly more people were willing to use an electronic system that lets family members know you are okay (46% vs. 40%) or a device that track steps in food preparation (27% vs. 17%).

Figure 12: Awareness of and Willingness to Use Home Safety Devices

Q12a-e: Have you heard or read about the following home safety items?

Q. 12_1a-e: If this was available, would you be willing to use it?



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP

Base: All respondents 65+

(Figure 12 continued on next page)

Figure 12: Awareness of and Willingness to Use Home Safety Devices (Continued)

AWARENESS: Have you heard or read about...?

USE: If this was available would you use it?

	2007 A (n=907)	2010 B (n=940)
An alarm that could tell you when a door or window has been opened or closed when not expected	65%	65%
Sensors that can be placed in home to detect if someone falls and call for help ¹⁷	21%	52%A
Small electronic devices that can turn off appliances and regulate environment	40%	42%
An electronic system that lets family know you are okay ¹⁸	36%	40%*
A device that tracks steps in food preparation so that if you are interrupted you can tell which steps you have completed ¹⁹	6%	17%A

	2007 A (n=907)	2010 B (n=940)
An alarm that could tell you when a door or window has been opened or closed when not expected	68%B	57%
Sensors that can be placed in home to detect if someone falls and call for help	40%	50%A
Small electronic devices that can turn off appliances and regulate environment	52%	48%
An electronic system that lets family know you are okay	56%B*	46%
A device that tracks steps in food preparation so that if you are interrupted you can tell which steps you have completed	20%	27%A

Source: Healthy @ Home, 2008 and Healthy @ Home 2.0, 2011, AARP
Base: All respondents 65+

2007 to 2010 Trend Analysis

The awareness of two items has increased in the past three years:

- Sensors in your home (21% to 52%).
- A device that tracks steps in the food preparation process so that it can remind you about the steps you completed in case you get interrupted (6% to 17%).

The willingness to use these same two items has increased:

- Sensors in your home increased (40% to 50%)
- A device that tracks food preparation (20% to 27%).

Willingness to use two items had decreased.

- An alarm that tells you when a window or door has been opened or closed unexpectedly (68% to 57%).
- Electronic devices that let you family know you are alright or if your daily routines have changed indicating you may need assistance (56%vs. 46%)²⁰

¹⁷ In 2007 this was described as “sensors that can be placed on existing home flooring that can tell when someone falls and call for help.”

¹⁸ In 2007 this was described as “an electronic device that lets someone who lives outside your home know if you are okay, or if your daily routine changes suggesting you might need help (such as not getting out of bed as usual).”

¹⁹ In 2007 this was described as “a device in the kitchen that records the steps taken while preparing food so that if you are interrupted it can remind you of the steps you already completed.”

²⁰ We slightly re-worded this question in 2010 for clarification and it is possible this influenced the level of willingness to use.

Perceived Benefits and Barriers

Benefits

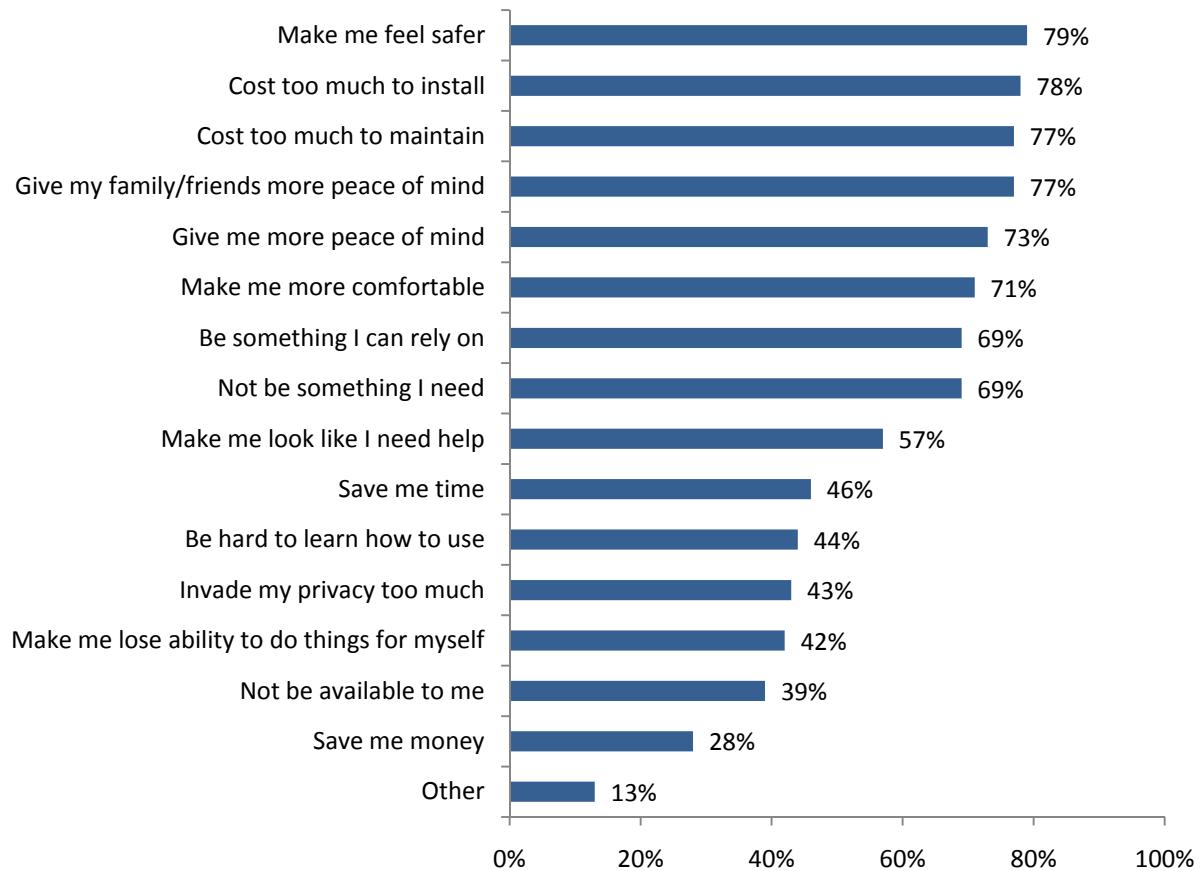
Almost eight in ten respondents 65+ say using home safety technology devices would make them feel safer and three-fourths say it would give their family and friends more peace of mind. About seven in ten say these devices would them more peace of mind, make them more comfortable and be something they can rely on. Less than half think they will save them time or money (Figure 13).

Barriers

More the three-fourths are concerned about the costs to install (78%) and maintain (77%) these devices. Almost seven in ten do not think it is something they would need (69%) and nearly six in ten are concerned about being stigmatized (57% say they would “make me look like I need help”). Fewer say they would be hard to learn how to use (44%), invade their privacy (43%) or make them lose the ability to do things for themselves (42%).

Figure 13: Perceptions among 65+ Regarding Home Safety Devices

Q 13. In general, home safety technology devices like those mentioned would:



Source: Healthy @ Home 2.0, 2011, AARP

Base: All respondents 65+

2007 to 2010 Trend Analysis

Out of the fifteen items, we surveyed respondents' opinions about, six items changed since the last study (Figure 14). Two of these items can be considered a positive change since they represent a reduction in a potential barrier. There was a ten point decrease in the proportion of people who said the technology would *not be available to them* (49% to 39%) and a eight point decrease in the proportion of people who thought the technology would *invade my privacy too much* (51% vs. 43%).

Two potential benefits continue to be perceived highly even though they have significantly decreased since 2007. These two items are *making me feel safer* (81% vs. 79%) and *giving my family /friends more peace of mind* (82% vs. 77%).

Two items that could be perceived as benefits have also declined since 2007 and the proportions have are below 50 percent. The proportion of people 65+ who perceives this technology could *save me time* has declined ten points (56% vs. 46%), and the proportion of people 65+ who perceives it will *save me money* (37% vs. 28%). The proportion of this group who thinks it will save them time has dropped ten points.

Figure 14: Perceived Benefits and Barriers among the 65+

Q13a-q: In general, home safety technology devices like those mentioned would:²¹

Perceived Benefits or Barriers	2007 A (n= 907)	2010 B (n=940)
Make me feel safer	84%B	79%
Cost too much to install	81%	78%
Cost too much to maintain	79%	77%
Give my family/friends more peace of mind	82%B	77%
Give me more peace of mind	78%b	73%
Make me more comfortable	76%b	71%
Be something I can rely on	72%	69%
Not be something I need	70%	69%
Make me look like I need help	59%	57%
Save me time	56%B	46%
Be hard to learn how to use	47%	44%
Invade my privacy too much	51%B	43%
Make me lose the ability to do things for myself	43%	42%
Not be available to me	49%B	39%
Save me money	37%B	28%
Other	12%	13%

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP
Base: All respondents 65+

²¹ In 2007 this question wording was "In general, home safety devices like those mentioned would :. . ."

Customer Service

The proportion of the 65+ group that says it would be at least somewhat important to them to have a customer service representative available to them 24/7 to provide assistance if they needed it has remained stable since the last study (Figure 15).

Figure 15: Customer Service

Q14: If I used a home safety technology device, it would be important to me to have a customer service representative available by telephone 24 hours a day 7 days a week to provide assistance if I needed help.²²

	2007 A (n=907)	2010 B (n=940)
Strongly agree	39%	38%
Somewhat agree	39%	38%
Somewhat disagree	14%	13%
Strongly disagree	7%	10%

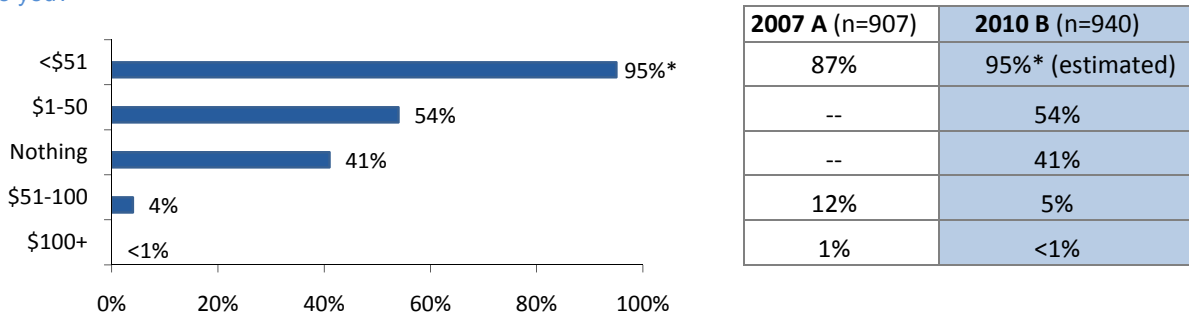
Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP
Base: All respondents 65+

Willingness to Pay

We revised this question this year to measure the proportion of people who would not pay anything for home safety technology devices. Four in ten people 65+ say they would not be willing to pay anything. More than half of the 65+ group was willing to pay \$1 to \$50 per month for these services (Figure16).

Figure 16: Willingness to Pay for Home Safety Technology Devices

Q. 15. Overall, how much would you be willing to pay per month to have these types of home safety technology devices available to you?



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP
Base: All respondents 65+

* (note: in 2010 we sub-divided the <\$50 category into two groups, those who pay nothing and those who would pay \$1-50 and these categories were summed to get an estimate of the proportion willing to pay <\$50.)

2007 to 2010 Trend Analysis

Combining these two results, we see the proportion of respondents willing to pay roughly less than \$50 dollars has increased seven points.

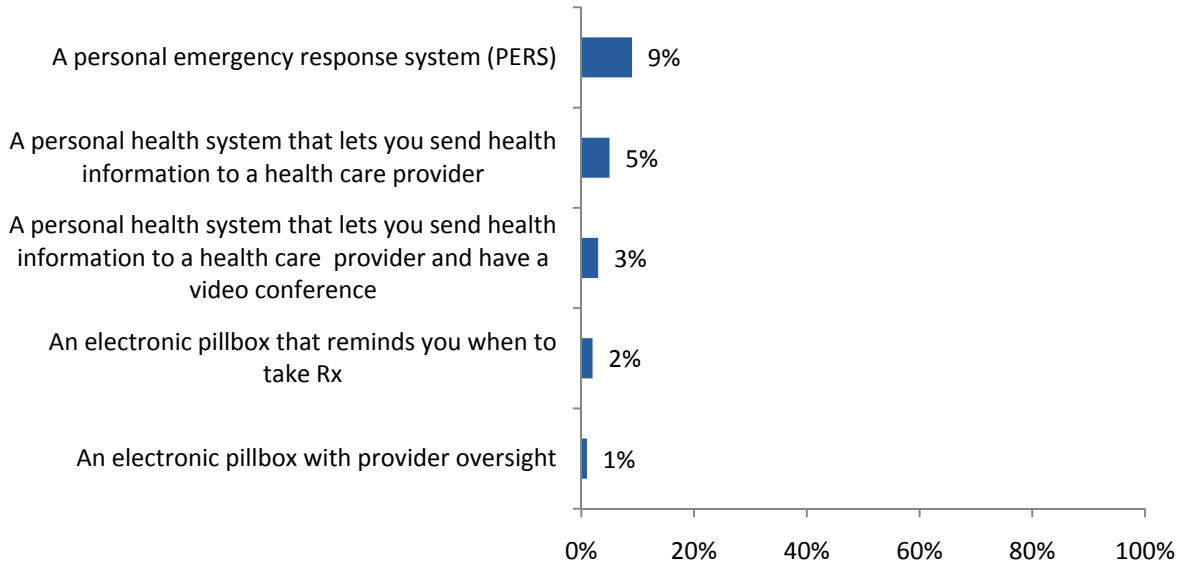
²² In 2007 this question wording was "If I used home safety devices (like those previously mentioned), it would be important to me to have a customer service representative available by telephone 24 hours a day, 7 days a week to provide assistance if I needed help using it."

VII. Current Use of Personal Health and Wellness Technology

The current reported use of personal health and wellness technology is low. Only one in ten (9%) respondents' reports using one of the most well known personal technology devices, a personal emergency response system (PERS). Even fewer report currently using any of the other four devices we asked about (Figure 17).

Figure 17: Current Use of Personal Health and Wellness Technology

Q16W2a-e. Do you currently use any of the following personal health and wellness technology devices?



Source: Healthy @ Home 2.0, 2011, AARP
Base: All respondents 65+

Awareness and Willingness to Use

Awareness

As shown in Figure 18, the majority of respondents have heard about PERS (84%). About half as many have heard about personal health systems that let them send health information to their health professional over the telephone (44%). About a quarter (24%) of respondents have heard about electronic pill boxes that remind them to take their medication and which medication to take. About one in five (22%) have heard about a personal health system that lets them have a video conference with their health professional. Fewer have heard about electronic pill boxes that remind them to take their medication and alert their health care provider when they have complied with their medication plan (14%).

Willingness to Use

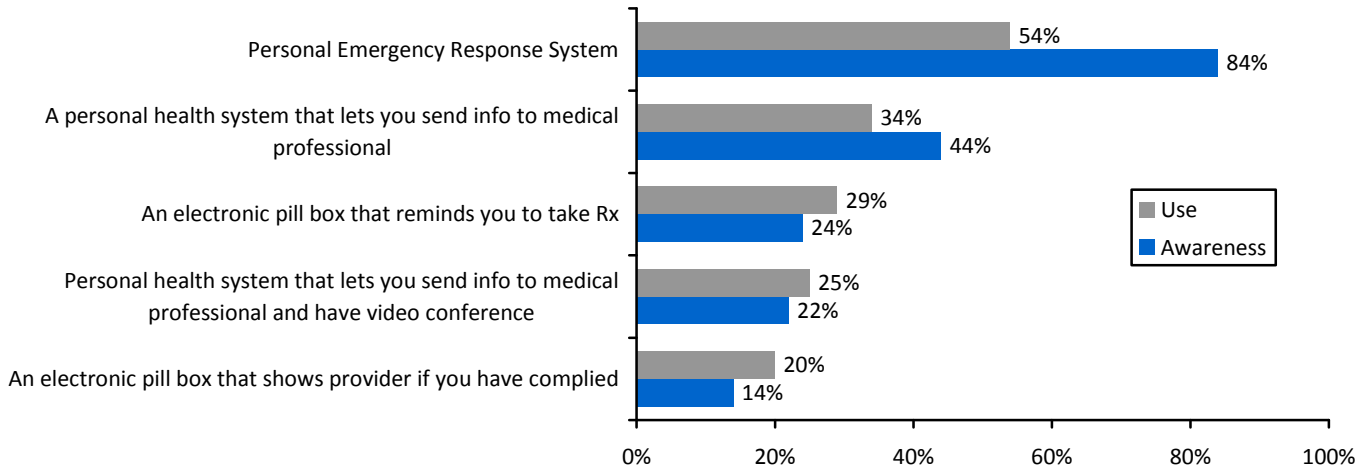
Willingness to use any of these technologies after learning about them exceeded awareness for three out of five items (the two types of electronic pill boxes and the personal health system that allows them to send their health provider information and have a video conference with them).

For the other two categories of devices, (PERS and personal health system that allows sharing health information with a health care professional by telephone), willingness to use lags behind awareness.

Figure 18: Awareness and Willingness to Use Personal Health and Wellness Devices

Q16a-e: Have you heard or read about the following personal health and wellness items?

Q16_1a-e: If this was available, would you use it?



Source: Healthy @ Home 2.0, AARP, 2011

Base: All respondents 65+ in order to match the 2007 data for comparison

AWARENESS: Heard or read about...

USE: If this was available would you use it?

	2007 A (n=907)	2010 B (n=940)
A personal emergency response system the user wears as a pendant or watch that allows her/him to call for help if needed	91%B	84%
A personal health system that lets people send medical information about themselves (like your blood pressure readings, weight, or how their heart is performing) from their home to a health professional over their telephone lines	48%	44%
An electronic pill box that reminds you when to take your medicine and which medicine to take	13%	24%A
A personal health system that does the same thing as the item above, but has a screen and allows you to have a video conference with your health care provider ²³	13%	22%A
An electronic pill box that does the same thing as the item above and also shows a health care provider if you have taken your medicine as planned	5%	14%A

	2007 A (n=907)	2010 B (n=940)
A personal emergency response system the user wears as a pendant or watch that allows her/him to call for help if needed	60%b	54%
A personal health system that lets people send medical information about themselves (like your blood pressure readings, weight, or how their heart is performing) from their home to a health professional over their telephone lines	47%B	34%
An electronic pill box that reminds you when to take your medicine and which medicine to take	40%B	29%
A personal health system that does the same thing as the item above, but has a screen and allows you to have a video conference with your health care provider	35%B	25%
An electronic pill box that does the same thing as the item above and also shows a health care provider if you have taken your medicine as planned	30%B	20%

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP
Base: All respondents 65+ in order to match the 2007 data for comparison

²³ In 2007 this was "A personal health monitoring system that does the same thing as the item above, but is TV-based and allows your doctor to communicate with you."

2007 to 2010 Trend Analysis

Awareness of PERS has dropped seven points since the last study (from 91% to 84%). However awareness of three other items significantly increased.

- Electronic pill boxes with medication reminders
- Personal health systems with video conferencing with health care providers
- Electronic pill boxes with medication reminders and provider oversight for compliance.

The willingness to use each item significantly decreased when compared to the 2007 data. Nonetheless, the willingness to use the two types of electronic pill boxes and personal health system with video conference with a health care provider exceeded respondents' level of awareness despite the fact that awareness increased and willingness to use decreased. This suggests there is a potential market for these devices which is not being addressed.

Perceived Benefits and Barriers

Benefits

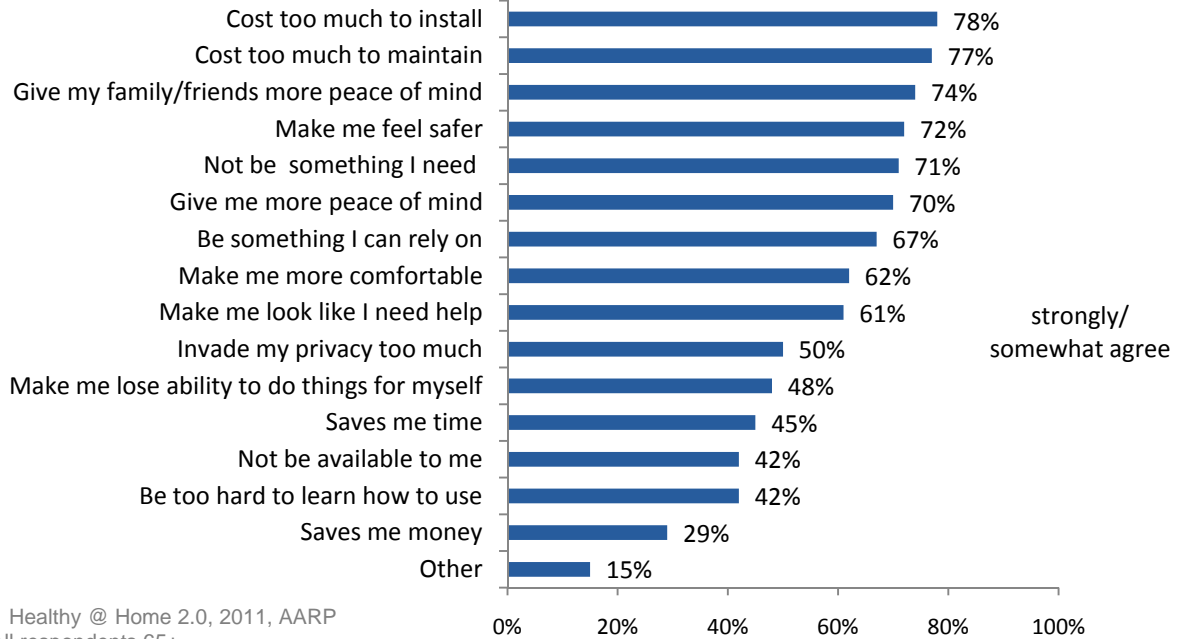
Nearly seven in ten, or more, respondents see the top benefits of using personal health and wellness items as providing emotional benefits such as more peace of mind to their family and friends (74%), making them feel personally safer (72%), giving them more peace of mind (70%), and being something they can rely on (67%). About six in ten say these devices could make them more comfortable (62%) see Figure 19.

Barriers

More than three-fourths of the respondents are concerned about costs (78% are concerned about installation costs and 77% are concerned about maintenance costs). About seven in ten question whether they need these items (71%) while six in ten are concerned about being stigmatized (look like I need help 61%) and half (50%) are concerned about losing their privacy. Fewer are concerned about losing their abilities (48%) for finding the devices too hard to learn how to use (42%).

Figure 19: Perceived Benefits & Barriers among the 65+ Regarding Personal Health & Wellness Devices

Q17a-q In general, personal health and wellness devices like those mentioned would:



Source: Healthy @ Home 2.0, 2011, AARP
Base: All respondents 65+

2007 to 2010 Trends

There has been considerable stability since our last study on the majority of these items. Only four items out of fifteen have significantly changed and these items decreased. There has been a decrease in the proportion of respondents who believe these devices will make them more comfortable (from 69% to 62%), will save them time (59% to 45%), will not be available to them (49% to 42%), or will save them money (35% to 29%).

Figure 20: Perceived Benefits and Barriers among the 65+

Q17a-q: In general, personal health and wellness devices like those mentioned would:

Perceived Benefits or Barriers	2007 A (n= 907)	2010 B (n=940)
Cost too much to install	81%	78%
Cost too much to maintain	80%	77%
Give my family / friends more peace of mind	77%	74%
Make me feel safer	78%	72%
Not be something I need	71%	69%
Give me more peace of mind	73%	70%
Be something I can rely on	69%	67%
Make me more comfortable	69% B	62%
Make me look like I need help	61%	61%
Invade my privacy too much	51%	50%
Make me lose ability to do things for myself	48%	46%
Save me time	59% B	45%
Not be available to me	49% B	42%
Be too hard to learn how to use	47%	42%
Save me money	35% B	29%

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP
Base: All respondents

Customer Service

Three-fourths (76%) of respondents *strongly* or *somewhat agree* it would be important to them to have a customer service representative available to them 24/7 to provide assistance if they needed it.

Figure 21: Customer Service

Q18: If I used a home safety technology device, it would be important to me to have a customer service representative available by telephone 24 hours a day 7 days a week to provide assistance if I needed help.

	2007 A (n=907)	2010 B (n=940)
Strongly agree	40%	39%
Somewhat agree	39%	37%
Somewhat disagree	13%	12%
Strongly disagree	7%	11%

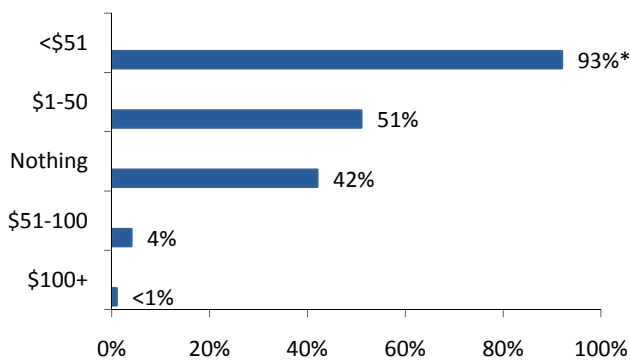
Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP
Base: All respondents 65+

Willingness to Pay

We revised this question this year to measure the proportion of people who would not pay anything for personal health and wellness devices we asked about. Four in ten people 65+ say they would not be willing to pay anything. More than half of the 65+ group was willing to pay \$1 to \$50 per month for these services.

Figure 22: Willingness to Pay for Personal Health and Wellness Items

Q19: Overall, how much would you be willing to pay per month to have these types of personal health and wellness devices available to you?



	2007 A (n=907)	2010 B (n=940)
<\$51	84%	93%* (estimated)
\$1-50	--	51%
Nothing	--	42%
\$51-100	11%	4%
\$100+	1%	1%

Source: Healthy @ Home, 2008 and Healthy @ Home 2.0, 2011, AARP
Base: All respondents 65+

*(note: in 2010 we sub-divided the <\$50 category into two groups, those who pay nothing and those who would pay \$1-50 and these categories were summed to get an estimate of the proportion willing to pay <\$50.)

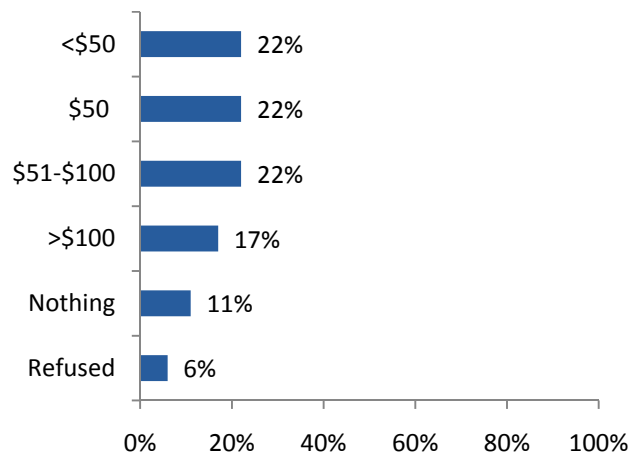
VIII. Financial Estimates on Expected Costs and Resources Available

We added two new questions to this iteration of Healthy @ Home to better understand how much people expect to pay for the entire set of technologies we asked about, and how much budget they have for this set of items. First, we asked respondents to think about all the categories of technology we asked about including a computer to maintain contact or get information, home and safety technology items, and personal health and wellness items. We acknowledged that each of these technologies has a cost (which we asked about separately) and, if some combination of these technologies could enable them to live independently, how much would they expect to pay for them all together in total per month.

The results (Figure 23) show that nearly one-quarter of the respondents (22%) say they would expect to pay one dollar to \$49 per month to pay for a combination of technologies that could meet their needs. About one in five says they would expect to pay \$50 (22%), or \$51 to \$100 (22%) per month to pay for some combination of technologies to meet their needs. About one in six (17%) would expect to pay over \$100 and about one in ten would expect to pay nothing. The median expected cost was \$50 per month.

Figure 23: How Much Would You Expect to Pay?

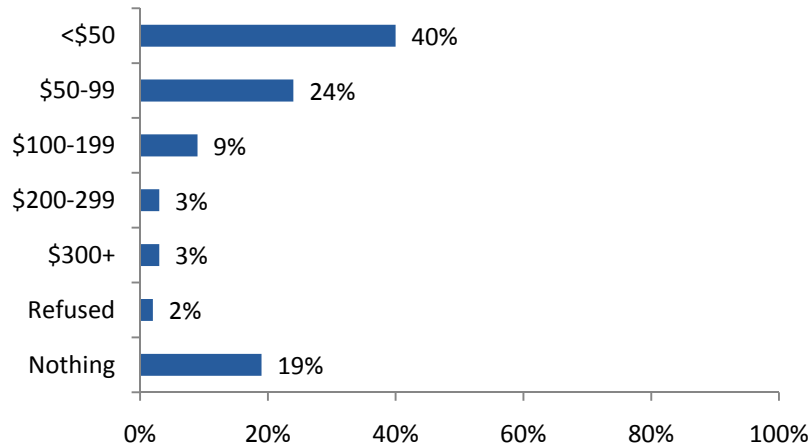
Q30w2. We have asked you to think about a variety of technology including: computers with Internet connections to stay in touch with other people, home safety technology devices, and personal health and wellness devices. Each of these technologies has a cost. If some combination of these technologies could enable you to live independently, how much would you expect to pay for them all together in total per month?



Source: Healthy @ Home 2.0, 2011, AARP.
Base: All respondents 65+

Figure 24: How Much do you Have to Spend on Technology Devices?

Q31w2. We have asked you to think about a variety of technology including: computers with Internet connections to stay in touch with other people, home safety technology devices, and personal health and wellness devices. Each of these technologies has a cost. If some combination of these technologies could enable you to live independently, how much would you have available to spend in total per month on this budget item?



Source: Healthy @ Home 2.0, 2011, AARP
Base: All respondents 65+

IX. Opinions about Telemedicine

We asked a series of four questions about respondent's willingness to participate in telemedicine under four hypothetical conditions. Two conditions were created by asking participants if they would be willing to have a heart condition diagnosed electronically from their primary care doctor's office or from their own home. The remaining two conditions were created by asking participants if they would be willing to have a heart condition monitored (watched) electronically from their primary care doctor's office or from their own home.

A majority of people 65+ said they would be *somewhat* or *very willing* to participate in each of the four conditions. For example, in 2010 approximately seven in ten respondents said they would be willing to have a cardiologist diagnose how their heart is working by receiving information that is transmitted electronically to them from their primary (family) doctor's office (70%) or monitored from their primary (family) doctor's office (73%) see Figure 25. Slightly fewer said they would be willing to have a diagnosis (68%) or monitoring (68%) from their home.

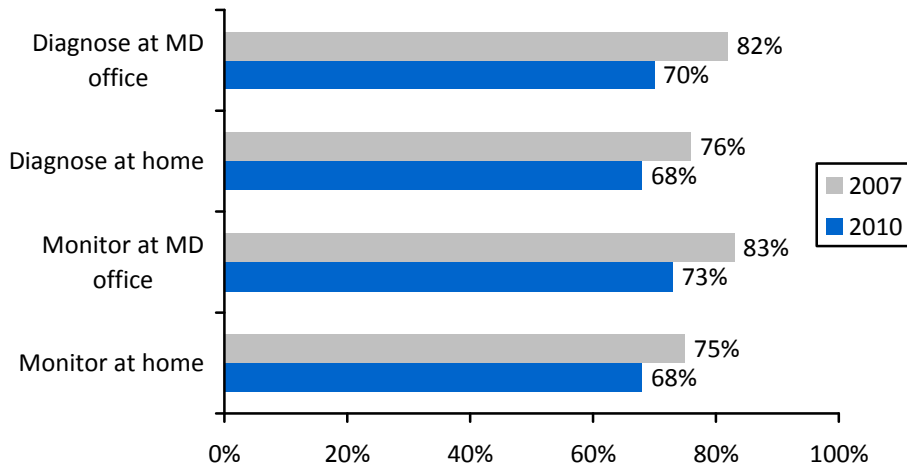
Figure 25: Willingness to Use Telemedicine under Four Conditions

Q23: How willing would you be to have a cardiologist (heart doctor) provide follow-up care by monitoring (watching) how your heart is working by receiving information that is transmitted electronically to them from your home?

Q22: How willing would you be to have a cardiologist (heart doctor) provide follow-up care by monitoring (watching) how your heart is working by receiving information that is transmitted electronically to them from your primary (family) doctor's office?

Q21: How willing would you be to have a cardiologist (heart doctor) diagnose how your heart is working by receiving information that is transmitted electronically to them from your home?

Q20: How willing would you be to have a cardiologist (heart doctor) diagnose how your heart is working by receiving information that is transmitted electronically to them from your primary (family) doctor's office?



Source: Healthy @ Home 2008, and Healthy @ Home 2.0, 2011, AARP.

Base: All respondents 65+

2007 to 2010 Trend Analysis

Even though the majority of respondents are still willing to participate in telemedicine, the proportion who are willing to participate decreased significantly from 2007 in three out of the four categories.

X. Conclusions and Recommendations

Social Connectedness and the Personal Computer

Family members are important social contacts for people 65+. Two-thirds of the 65+ population currently use personal computers to communicate with family and friends by e-mail and half search for health information on-line. Awareness of technology to see, hear, and communicate with others has significantly increased since 2007 (52% to 71%). While the willingness to use a personal computer to search for health information is still strong, it has decreased since 2007 (84% to 73%). Willingness to use a personal computer for other purposes we asked about has remained stable over this timeframe. Is it possible we have saturated this market?

The benefits of using a personal computer are perceived as saving time (which has remained steady since 2007) and giving their family and friends more peace of mind (which is still perceived as a benefit by the majority of respondents, but it's perception as a benefit has significantly decreased since 2007).

Given the growth in awareness and the stability in willingness to use personal computers, perhaps we have reached a saturation point with the use of personal computers and should look to other areas for opportunities.

Home Safety Technology Devices and the Potential for Independence

Less than one in five people 65+ currently use a home safety technology device we asked about. Some of the devices we asked about appear to have market potential.

- More than half of the respondents have heard or read about an alarm that could tell you when a door or window has been opened or closed when not expected, and sensors that can be placed in homes to detect if someone falls help. Nearly as many would be willing to use them if they were available. The willingness to use sensors that can be placed in homes to detect if someone falls and call for help has significantly increased since 2007 suggesting a potential market opportunity.
- Among the remaining three home safety technology devices we asked about, awareness was lower than the willingness to use these items if they were available. This suggests that once people 65+ become aware of these items, they may be willing to use them. These are:
 - Small electronic devices that can turn off appliances (such as stove) when not in use, turn lights on and off as needed, regulate the temperature.
 - A device in the kitchen that keeps track of where you are in the process of preparing food so that if you are interrupted it can remind you of the steps you have already completed.

- An electronic system that lets a family member or friend know if you are okay, or if your usual daily routine changes suggesting you might need help (such as getting out of bed as usual).²⁴

Almost nine out of ten people 65+ say using these devices would help them feel safer. Almost eight out of ten say using these devices would give their family and friends more peace of mind and seven out of ten say they would allow them to have more personal peace of mind. However, the cost to install and maintain these devices is a potential barrier for about three-fourths of the 65+ population.

Use and Willingness to Use Personal Health and Wellness Technology

Less than one in ten people 65+ currently use any of the personal health and wellness technology devices we asked about. Awareness of three items (bulleted below) increased since 2007. Although willingness to use these items declined since 2007, willingness to use is still higher than awareness in the current study for the following three personal health and wellness items:

- An electronic pill box that reminds you when to take your medicine and which medicine to take.
- An electronic pill box that does the same thing as the item above and shows a health care provider you have taken your medicine as planned.
- Personal health system that lets you send medical information such as your blood pressure readings or diabetes results to a medical professional and allows you to have a video conference with them.

Given consumers' cost concerns, the two electronic pill box items may have greater market potential than the personal health system with video conferencing.

Expectations and Available Budget for a Combination of Technology to Meet Needs

For the first time we asked a question about what respondents would expect to pay for a combination of technology that could enable them to live independently. A small proportion, less than one in ten people 65+, say they would pay nothing. The rest are evenly spread across different price ranges. About one in five say they expected to pay \$1 to 49, \$50, \$51-\$100 or over \$100 per month.

The estimated monthly budget available to spend on technology devices are distributed differently. One in five says they have nothing to spend on a combination of devices that would enable them to live independently. Four in ten say they have less than \$50 per month available, one-quarter have \$50 to \$99 per month, one in ten have \$100 to \$199 and few have over \$200 a month to spend on this budget item.

²⁴ The wording of this item was changed slightly in 2010 to better describe the system. Comparison of question wording appears in an appendix.

Consequently, cost to install and maintain devices will need to be addressed. It will be important to select items that people 65+ are receptive to and to keep the costs within their budget range if they are to be adopted so that they can contribute to the health and well-being of this population.

Recommendations

- Accept the fact that many people 65+ do not know what their future holds, and that this uncertainty leaves them at a loss when trying to prepare or plan ahead.
- Recognize that older adults do face considerable uncertainty regarding their health and their finances.
- Find ways to help older adults identify signs that may indicate the need for adjustments to their lifestyle or to their home to create smooth transitions rather than disruptive crises. For example, regular eye exams can help detect changes in vision which can affect safety on the stairs or while driving. Another example is having balance checks to determine whether the lack of stability creates a potential for increased risk of falling. These seem like reasonable suggestions that are precursors to needing any technological devices to detect falls. Memory checks are another illustration that can influence one's ability to remember when and what medications need to be taken to maintain one's health. Dealing with these issues may mean helping older adults process their denial of changes in personal status and willingness to make lifestyle adjustments.
- Consider whether the personal computer market has been saturated and reached its natural limits for this group.
- Address home safety needs associated with alarms that can indicate when a door or window had been opened unexpectedly.
- Focus more attention on the use of small electronic devices that can regulate the home environment for safety (turn stove off when not in use), convenience (turning lights on and off automatically), and comfort (regulating the temperature). Such home devices appeal to people 65+ and are potentially affordable.
- Focus more attention on medication management devices which were well received by this group and are potentially affordable.

XI. Detailed Findings: Profile of Caregivers 45 to 75

With the exception of age, the caregivers in this study closely parallel the caregiver characteristics we profiled in *Caregiving in the U.S.* in 2009 as well as the first edition of *Healthy @ Home* in 2008. These caregivers are 45 to 75 years of age. They either currently provide care (70%) or provided care during the past 12 months (30%) to a relative or friend age 50 or older. More than half (55%) are women (Figure 26). Providing care was defined as assisting the person they help with at least one activity of daily living (ADL) or instrumental activity of daily living (IADL) (Figure 27). The most frequently mentioned ADLs include *giving medicines, pills or injections* (49%), *getting dressed* (33%), and helping *get to the bath tub or shower* (30%). The most frequently mentioned IADLs include *providing transportation by driving or helping get the person you help transportation* (81%), *grocery shopping* (79%), providing help to *manage finances* (72%) and help to *do housework* (72%).

More caregivers say they provide help to their *mother* (36%) than to any other relative (11% *spouse or partner*, 11% *father*, 10% *mother-in-law or father-in-law*, 4% to *aunt or uncle*, 3% to *son or daughter*, and 7% to *other relative*).²⁵ The second most frequently identified type of care recipient was a *friend or neighbor* (17%).

Most caregivers (46%) provide between *one to eight hours of care* in an average week, but one-quarter (24%) provide *nine to twenty hours of care* in an average week. Fewer provide less than *one hour of care* (10%), *21 to 39 hours of care* (9%), or *40+ hours* (11%).

Most care recipients (72%) live in their own home and the greatest proportion of caregivers (41%) say they live *less than 20 minutes* away from the person they help. Three in ten (31%) caregivers in this study say they *live in the same household* with their care recipient. Fewer (15%) say they live *20 minutes to one hour* away or further (4% live one to two hours away and 9% live more than two hours away).

Most caregivers (59%) say they feel they had a choice in taking on the role, but few think of themselves as caregivers (32%). Perhaps the two-thirds of caregivers who do not self-identify as a caregiver place a higher value on other roles in their lives when defining their self-identity.²⁶ This is supported by the fact that more than seven in ten (72%) say they know other people who provide similar assistance to someone. Three-fourths (75%) say they are in contact with these people on a regular or as needed basis. They most often communicate by telephone (73%), less often have in-person visits (60%) while only about one in five (18%) communicate with other caregivers through the Internet. Few (5%) use social networking sites, such as *Facebook*, to communicate with other caregivers.

²⁵ Caregivers are more likely to say they provide help to one person in 2010 than in 2007 (72% vs. 67%).

²⁶ For example, another role many caregivers have is that of employee. Almost six in ten (59%) caregivers say they worked full or part-time while they provided help to someone age 50+. Among these caregivers, six in ten (60%) say the person they report to at work knows they are a caregiver, or provide help to someone age 50+.

Figure 26: Proportion of Caregivers 45-75 by Age and Selected Characteristics

Item	Total 2007 A (n=1023)	Total 2010 B (n=1152)	Age 45-54 2010 C (n=501)	Age 55-64 2010 D (n=447)	Age 65-75 2010 E small base (n=204)
Mean age	56	57	50	59	69 CD
% by category					
Gender					
• Female	59%	55%	54%	56%	55%
• Male	41%	45%	46%	44%	45%
Race / ethnicity					
• White, non-Hispanic	70%	69%	68%	64%	80%
• Ethnic (net)	30%	32%	32%	37%	20%
Marital status					
• Married	56%	54%	55%	54%	55%
• Single	15%	19% A	25% DE	17%	11%
• Divorced	22%	19%	16%	22% C	17%
• Widowed	5%	5%	2%	4%	12% CD
• Separated	2%	3%	3%	2%	5%
Care recipient lives in their own home	72%	72%	75% E	73%	63%
Do you feel you had a choice in becoming a caregiver (% yes)	59%	59%	60%	58%	59%
Do you think of yourself as a caregiver (% yes)	--	32%	35% E	31%	25%
Do you know other people who provide similar assistance (% yes)	--	72%	71%	72%	75%
% with median income	43%	45%	45%	43%	47%
Education					
• College+	35%	29%	28%	31%	31%
• HS grad or GED	28%	31%	34%	28%	32%
Employment – working (NET)	57% B	47%	63% DE	45%	14%
Residence – own	77%	79%	75%	81%	84%

Source: Healthy @ Home, 2008, Healthy @ Home 2.0, 2011, AARP

Figure 27: Proportion of Caregivers who Provide Care Recipient Help with ADLs and IADLs
 Q3a-g and Q4a-f: Proportion of Caregivers who provide help with ADL/IADL (a lot of help, or some help)

Activity (% yes; provides a lot of help or some help)	2007 A (n = 1023)	2010 B (n = 1152)
Get in and out of bed	29%	29%
Get dressed	33%	33%
Get to and from the toilet	25%	25%
Get into the bath tub or shower	30%	30%
Deal with incontinence or diapers	21%	21%
By feeding him/her	24%	23%
Giving medicines, pills or injections	46%	49%
Manage finances, such as pay bills or fill out insurance claims	68%	72%
Grocery shopping	79%	79%
Do housework, like dishes, laundry, or straightening up	71%	72%
Prepare meals	62%	65%
Provide transportation by driving or helping get the person you help transportation	81%	81%
Arrange or supervise services from an agency, such as nurses or aides	40%	41%

Source: Healthy @ Home, 2008, Healthy @ Home 2.0, 2011, AARP
 Base: Caregivers 45-75

When these caregivers are in contact with other caregivers, they most often give each other emotional support by sharing things we are worried about and encouraging each other (69%). More than half (59%) say they share tips about how to make things easier or how to solve a specific problem. Informal sharing of information about products or services that could help other caregivers is another frequent topic of conversation (38% said yes), and about four in ten (37%) also say they pray together or say we will pray for each other and/or the people they are helping.

2007-2010 Trend Analysis

There are only a few demographic differences between the caregivers in this study and those we surveyed in 2007, such as the proportion of single, never-married caregivers has increased four points (15% to 19%) and the proportion of working caregivers has decreased 16 points (68% to 52%). It is possible that the lower proportion of employed caregivers is related to the overall rise in unemployment in the U.S. since 2007.

XII. Caregivers Perceived Problems and the Value of Solving Them

A content analysis was conducted on the six open-ended questions respondents answered regarding their top three problems, and what it would be worth to them to solve each of these problems (Figure 28).²⁷ When we looked at the top three responses for each question about perceived problems (that is, what are the top three problem you face as a caregiver) the results show three issues consistently emerged for each question.²⁸ The following figure shows how the priority shifted from question to question.

Figure 28: Caregivers' Perceived Problems

Q16w2: What are the top three problems you face as a caregiver that you need help solving?

Problem 1	Time Management
	Financial Management
	Emotional Issues
Problem 2	Emotional Issues
	Financial Management
	Time Management
Problem 3	Emotional Issues (self doubt emerges)
	Financial Management
	Time Management

Source: Healthy @ Home 2.0, 2011, AARP

It is important to remember that *all* respondents did not answer these questions, and the responses cannot be tested for statistical significance. However, this analysis emphasizes the personal strengths and struggles of caregivers and their care recipients bringing their personal stories to life.

To honor their stories and provide a sense of their experience, this section provides a small sampling of quotes that reveal the raw side of caregiving.

What are the top three problems you face as a caregiver that you need help solving?

Problem one: Time Management

Caregivers often used a one-word or phrase reply, simply “*time*” or “*lack of time.*” Other caregivers elaborated with comments like “*feeling like I have no time for myself*”, “*managing my time to take care of the needs of my mother-in-law*”, “*being able to provide the necessary daily routines but also help provide a quality of life atmosphere in a limited time frame*”, “*disruption of my own life*” “*not enough time to do my best*” “*how to maintain some personal life*”, or “*trying to be in two places.*”

²⁷ This section could be an entire report. The material presented is greatly condensed.

²⁸ Many other issues emerged in addition to the top three including safety issues, transportation, dealing with service providers such as doctors, health organization, government services.

Problem two: Financial Management

Caregivers often used a one-word response such as “*money*” or “*finances.*” Others were more expressive saying things like “*taking care of my expenses*”, “*I worry about my mother running out of money to continue to live in her current situation*” or “*paying for prescriptions*”,

Problem three: Emotional and Communication Issues

Again, caregivers often provided one-word or phrase responses such as “*stress*”, “*burned-out*” “*communication*” or “*patience*”. While other shared comments like: “*My emotional response to my situation, resentment, anger, frustration, guilt*” “*boundaries and emotional balance*”, “*getting the person I am providing help to, to cooperate with me*”, “*dealing with their demands*”, “*getting extra help from other family members*”, “*bad behavior*”, “*stubbornness*”, “*pride of parent*” “*I would like to know how best to approach a person in denial*”, or “*how to deal with senility* (also depression, memory loss, and other cognitive issues).

What would it be worth to you to solve the first, second, third problem you mentioned?

This was a difficult question for caregivers to answer. Many said they did not understand the question (did we mean money? a dollar amount? or something else?) The caregivers who answered provided a range of responses to this question. Some answers reflect hopelessness and resignation (“*nothing*”) and some reflect a search for answers (“*How do you get more time?*”); there was little optimism. Their responses also range from “*nothing*” to “*priceless*”.

Problem one: Time Management

Caregivers identified their first problem by saying things like “*Having time to myself without being tired all the time would be worth a lot*”, “*It would help to relieve me so I could have time to recharge my batteries and better serve the person I care for*” or “*How do you define or measure worth? It would relieve some of my guilt for being impatient with my mother. She knows I am doing things with her that I don’t want to do, like waiting for hours in doctor’s offices and it hurts her.*”

Problem two: Financial Management

The worth caregivers place on solving financial issues are reflected in the following quotations: “*Mentally priceless. Financially, impossible to stretch money any further.*” “*My friend doesn’t get enough income from SSI and needs the extra help. Real sad but real true. If you aren’t rich you don’t want to get old in America.*” “*A lot of stress would be relieved*”, “*A lot, the worry and the aggravation*” “*would give extra dollars to accomplish the things that need to be accomplished*” or “*peace of mind*”.

Problem three: Emotional and Communication Issues

“I can’t put a value on it”, “it would make life a lot easier”, “it would provide a sounding board for my concerns”, “We don’t have any extra monies, but in terms of peace of mind and maintaining a loving relationship it would be worth whatever time was necessary” or “priceless”.

Underlying these major three issue areas is a desire to better understand what they should be looking for in the behavior of the person they help so they will know when to seek more or different supports for the person they help.

Our challenge as thought leaders is to find ways to help caregivers address these problems. The challenge is a steep one, and one which current technology may or may not alleviate. In any event, we need to keep these perspectives in mind as we think about how to navigate through these issues and chart a future course.

Next we look at what technologies caregivers are currently using, what they are aware of and willing to use and what benefit and barriers they associate these potential solutions.

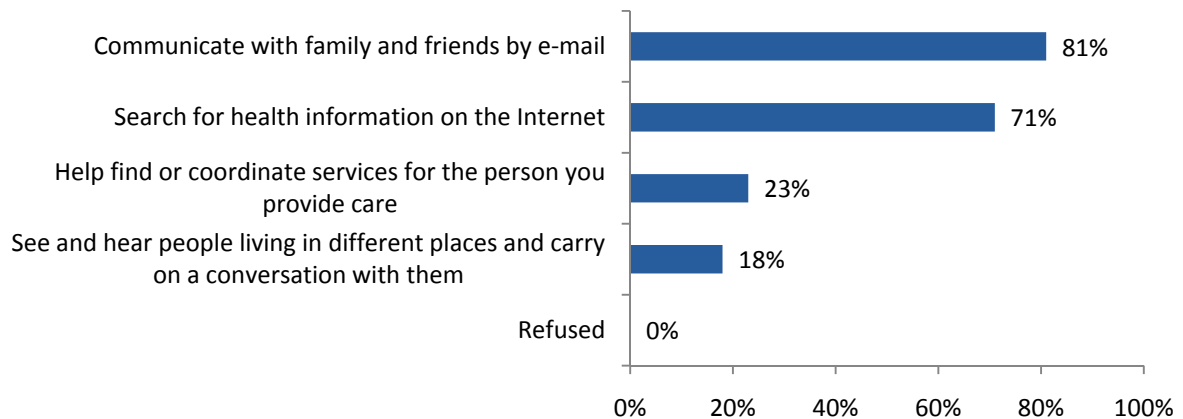
XIII. Current Use of Personal Computers

More than eight in ten (81%) caregivers 45 to 75 years say they communicate with family and friends by e-mail (Figure 29). Seven in ten (71%) caregivers search for health information on the Internet. About one in five caregivers use a personal computer for two activities:

- Help find or coordinate services for the person they provide care (23%), or
- To see and hear people living in different places and carry on a conversation with them (18%).²⁹

Figure 29: Current Use of Personal Computers

Q 11w2aa-ad: Do you currently use a personal computer to:



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP
Base: Caregivers 45-75.

Awareness and Willingness to Use Personal Computers

A majority of caregivers are aware of, and willing to use, a personal computer for each of the tasks we asked about. Awareness of using a personal computer for each of the tasks exceeded willingness to use them in each case (Figure 30).

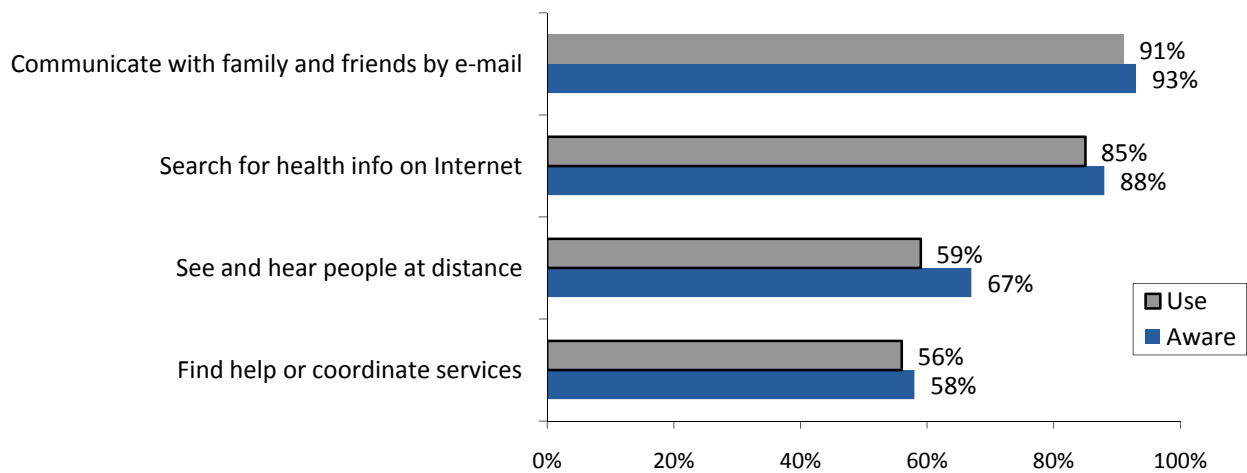
Caregivers are most likely to be aware of and willing to use a personal computer to communicate with family and friends by e-mail. This is closely followed by searching for health information on the Internet. About six in ten or more are aware of and willing to use a personal computer to see and hear people in different places and carry on a conversation with them. More than half of caregivers use a personal computer to find help or coordinate services for the person they provide care.

²⁹ Most caregivers live near their care recipient, so long-distance caregiving is not a problem for the majority of caregivers.

Figure 30: Awareness and Willingness to Use Personal Computers to Maintain Contact

Q11. Have you ever heard or read about using a personal computer to: . . . ?

Q11_1. If this was available, would you use a personal computer to: . . . ?



AWARENESS: Heard or read about...

	2007 A (n=1023)	2010 B (n=1152)
E-mail family, friends	--	93%
Search for health information	91% ^b	88%
See, hear, communicate	64%	67%
Find help or services	55%	58%

USE: If this was available, would you use?

	2007 A (n=1023)	2010 B (n=1152)
E-mail family, friends	--	91%
Search for health information	87%	85%
See, hear, communicate	63%	59%
Find help or services	74% ^B	56%

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, 2011, AARP.

Base: All caregivers 45-65 in order to match the 2007 data for comparison.

Since most caregivers live near their care recipient, it is understandable that the ability to see and hear people at a distance holds less appeal than communicating by e-mail. Technology to help caregivers see and hear people at a distance may be more appropriate for long-distance caregivers.

It is possible that the decline in the economy leaves caregivers with fewer financial resources to pay for services and as a result less than six in ten caregivers are looking for on-line help to find or coordinate services.

2007 to 2010 Trend Analysis

There has been considerable stability among caregivers' awareness and willingness to use a personal computer to do these tasks since the last survey, with one exception. There has been a substantial drop in the proportion of caregivers who are willing to use a personal computer to find help or coordinate services for the person she/he provides care.

Perceived Benefits and Barriers

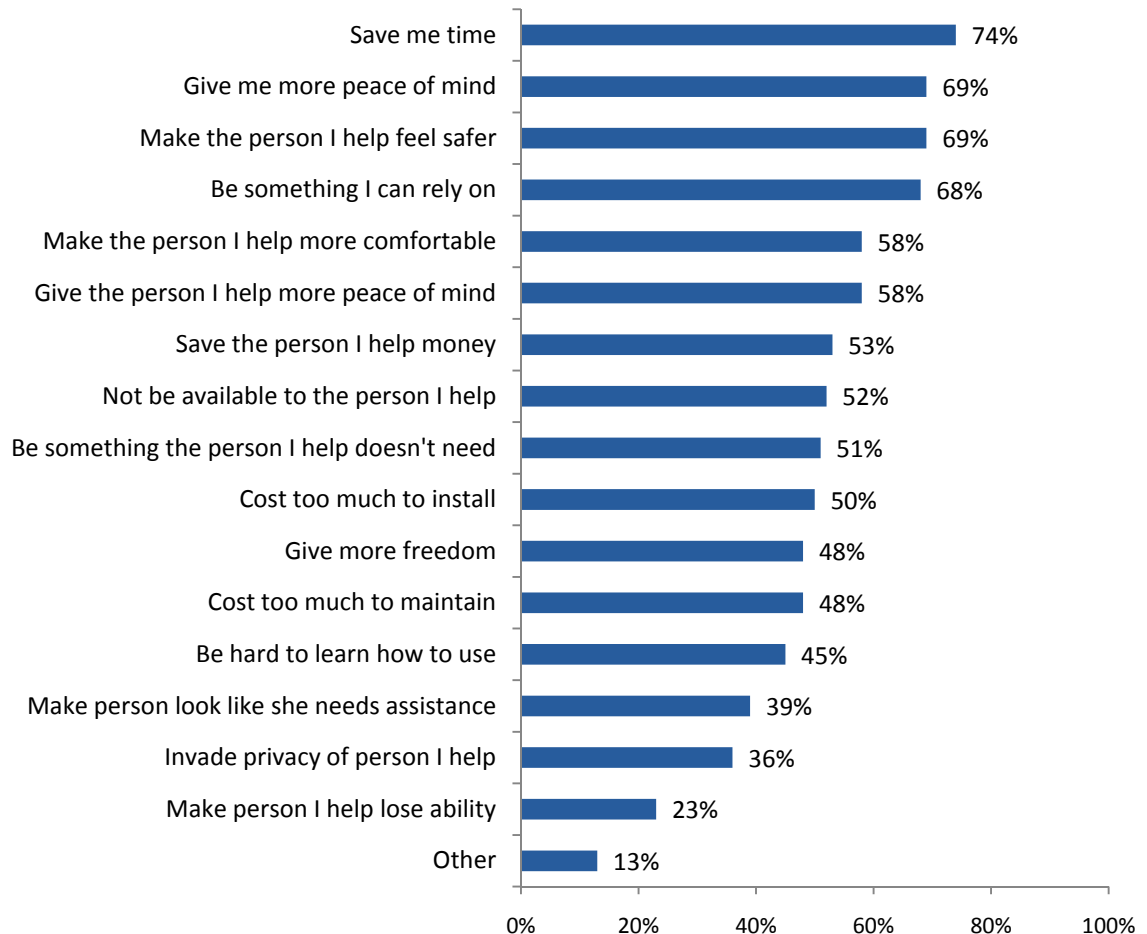
The majority of caregivers perceive the top seven items as potential benefits of using a personal computer (Figure 31). For example, majorities say a personal computer could:

- Save them time (74%),
- Give them more peace of mind (69%)
- Make the person they help feel safer (69%)
- Be something they can rely on (68%)
- Make the person they help more comfortable (58%)
- Give the person they help more peace of mind (58%)
- Save the person I help money (53%)

Half, or less, of caregivers perceive a computer creating barriers for them or the person they help, such as *cost too much to install or maintain or be hard to learn how to use*.

Figure 31: Perceived Benefits and Barriers Regarding Use of Personal Computers to Stay in Touch / Get Information

Q 12. In general, using a personal computer to stay in touch with others or get information would:



Source: Healthy @ Home 2.0, 2011, AARP
 Base: Caregivers 45-75

Figure 32: Perceived Benefits and Barriers among Caregivers 45-75

Q 12a-g. In general, using a personal computer to stay in touch with others or get information would:

Perceived Benefits or Barriers	2007 A (n=1023)	2010 B (n=1152)
Save me time	78%	74%
Give me more peace of mind	77% B	69%
Make me feel the person I help feel safer	78% B	69%
Be something I could rely on	74% B	68%
Make the person I help more comfortable	69% B	58%
Give the person I help more peace of mind	69% B	58%
Save the person I help money	66% B	53%
Not be available to the person I help	54%	52%
Be something the person I help doesn't need	44%	51% A
Cost too much to install	59% B	50%
Give me more freedom	58% B	48%
Cost too much to maintain	56% B	48%
Be hard to learn how to use	52% B	45%
Make the person I help look like he/she needs assistance	41%	39%
Invade the privacy of the person I help	41%	36%
Make the person I help lose ability to do things for her/himself	26%	23%
Other	10%	13%

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
 Base: Caregivers 45-75

2007 to 2010 Trend Analysis

Although a majority of caregivers continue to see the top items as benefits of using a personal computer, there has been a general decline in the proportion of caregivers who rate these benefits highly (Figure 32). The one item that did increase is a potential barrier. That is, there has been increase in the proportion of caregivers who say that a personal computer might be something the person she/he helps doesn't need (44% to 51%).

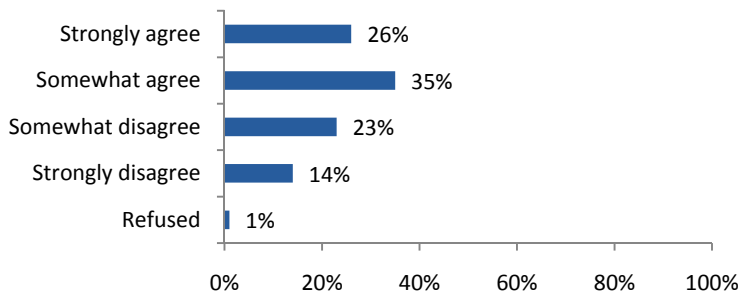
The benefit of saving the caregiver time remained stable. The other items that remained stable are potential barriers such as making the person they help look like she/he needs assistance (41% and 39%) or making the person they help lose the ability to do things for her/himself (26% and 23%).

Customer Service

About six in ten (61%) caregivers say they at least *somewhat agree* that they would like to have a customer service representative available by telephone 24 hours, 7 days a week to provide assistance if they needed it (Figure 33). Less than four in ten (37%) at least *somewhat disagree* with this statement.

Figure 33: Importance of Customer Service

Q. 13. If I used a personal computer to stay in touch with other people, how important is it to have a customer service representative available by telephone 24 hours, 7 days a week to provide assistance if I needed help using it?



	2007 A (n=1023)	2010 B (n=1152)
Strongly agree	41%B	26%
Somewhat agree	34%	35%
Somewhat disagree	13%	23%A
Strongly disagree	11%	14%A
Refused	--	1%

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011.
Base: Caregivers 45-75

2007 to 2010 Trend Analysis

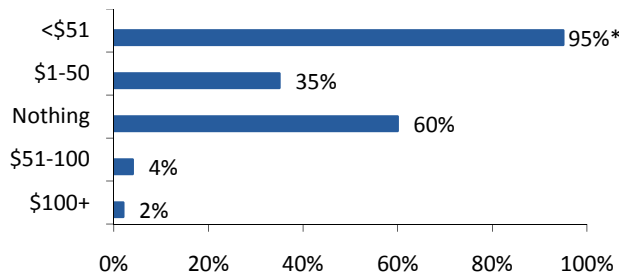
The proportion of caregivers who *strongly agree* it is important to have a customer service representative available by telephone 24 hours, 7 days a week to provide assistance if needed decreased substantially (from 41% to 26%). However, the proportion of those who *somewhat agree* with this statement remained stable as did the proportion of those who say they *disagree* with the statement.

Willingness to Pay

Six in ten (60%) caregivers say they would not pay anything to use a personal computer to stay in touch with other people while approximately one-third (35%) say they would pay \$1 to \$50 per month for this service (Figure 34).

Figure 34: Willingness to Pay for Personal Computer to Stay in Touch with Others

Q. 14. Overall, how much would you be willing to pay per month to use a personal computer to stay in touch with other people?



	2007 A (n=1023)	2010 B (n=1152)
<\$51	85%	95%* (estimated)
\$1-50	--	35%
Nothing	9%B	4%
\$51-100	2%	2%
\$100+	--	60%

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
Base: Caregivers 45-75

* (note: in 2010 we sub-divided the <\$50 category into two groups, those who pay nothing and those who would pay \$1-50 and these categories were summed to get an estimate of the proportion willing to pay <\$50.)

2007 to 2010 Trend Analysis

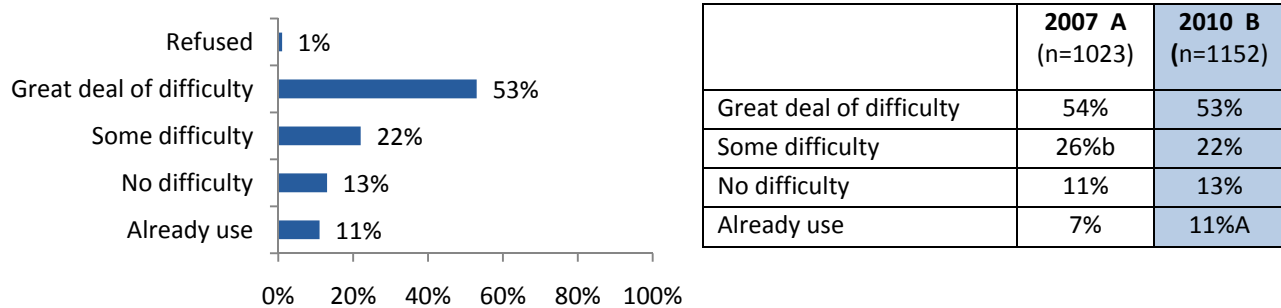
The proportion of caregivers who say they would be willing to pay \$51 to \$100 per month for this service declined (9% to 4%).

Perceived Difficulty Persuading Care Recipient to Use Personal Computer

More than half (53%) of caregivers say they think they would have a *great deal of difficulty* persuading the person they help to use a personal computer (Figure 35). About one in five (22%) say they think they would have *some difficulty* doing the same. Only about one in ten (11%) already use a personal computer to stay in touch with the person they provide care.

Figure 35. Perceived Difficulty Getting Care Recipient to Use Personal Computer

Q15. How much difficulty do you think you would have persuading the person you help to use a personal computer to stay in touch with you?



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
Base: Caregivers 45-75

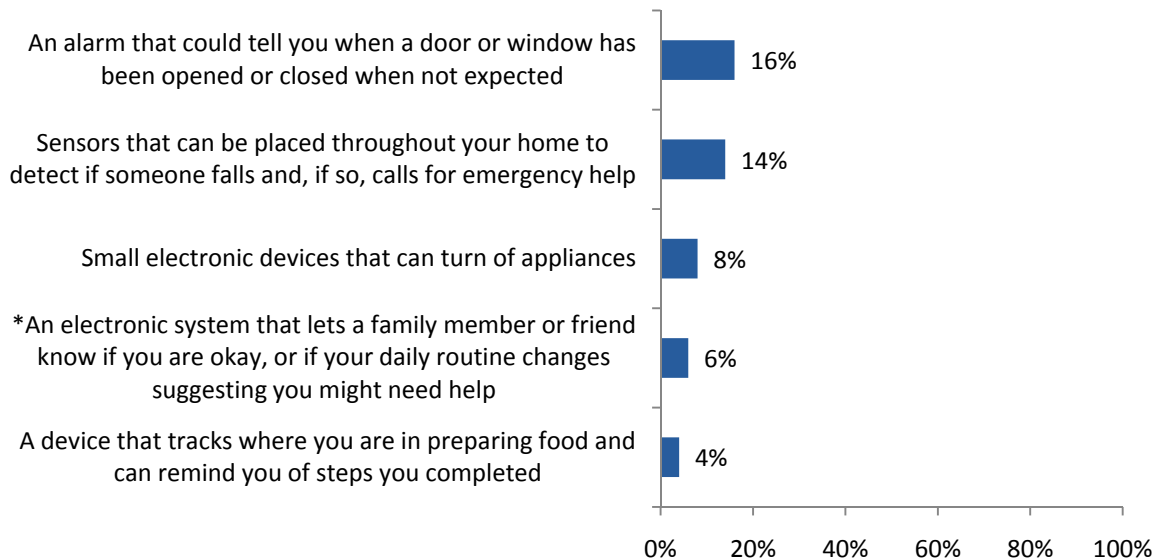
2007 to 2010 Trend Analysis

There has been considerable stability in the proportion of caregivers who say they will have difficulty persuading the person they help to use a personal computer. However, there has been an increase in the proportion who say they already use a personal computer to stay in touch with the person they assist (7% to 11%).

XIV. Current Use of Home Safety Technology Devices

Few caregivers say the person they assist uses any home safety technology devices. Less than one in five caregivers say their care recipient currently uses *an alarm that could tell you when a door or window has been opened or closed when not expected* (Figure 36). Less than one in ten caregivers say they currently use *small electronic devices that can turn off appliances, such as the stove, lights or temperature; an electronic system that lets a family member or friend know if you are okay, or if your daily routines changes suggesting you might need help; a device that tracks where you are in preparing food and can remind you of steps you completed.*

Figure 36: Proportion of Caregivers whose Care Recipient Currently Uses Home Safety Devices Q16w2. Does the person you assist currently use any of the following home technology devices?



Source: Healthy @ Home 2.0, AARP, 2011
Base: Caregivers 45-75

Awareness and Willingness to Use

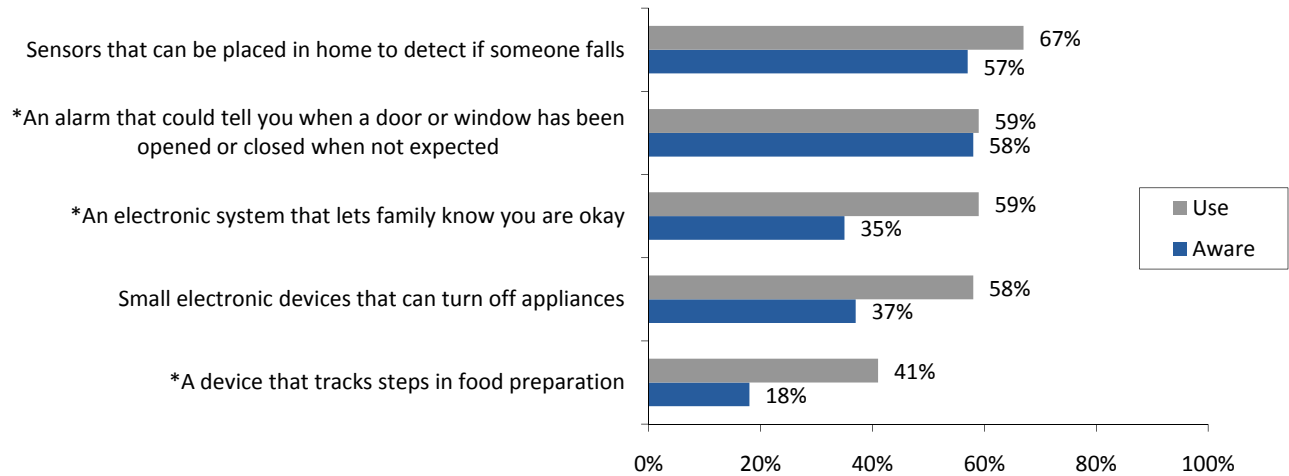
The proportion of caregivers who say they are aware of a variety of home safety technology devices ranged from a high more than half (58%) who are aware of an alarm that could tell you when a door or window has been opened unexpectedly, to a low of about one in five who were aware of a device that tracks steps in food preparation (18%) (Figure 37). Willingness to use these devices ranged from a high of two-thirds (67%) who said they would use sensors placed throughout the home to detect if someone falls to a low of about two in five (41%) who said they would use a device that tracks steps in food preparation.

Notably, the willingness to use each of these home safety technology devices if they are available exceeds awareness in every case, suggesting there is a potential pent-up demand for these technologies.

Figure 37: Awareness of and Willingness to Use Home Safety Technology Devices

Q16a-e. Have you heard or read about the following home safety items?

Q16_1a-e. If this was available, would you be willing to use it?



AWARENESS: [heard or read about](#)

	2007 A (n=907)	2010 B (n=940)
An alarm that could tell you when a door or window has been opened or closed when not expected	66% B	58%
Sensors that can be placed in home to detect if someone falls and call for help	26%	57% A
Small electronic devices that can turn off appliances and regulate environment	35%	37%
An electronic system that lets family know you are okay	19%	35% A
A device that tracks steps in food preparation so that if you are interrupted you can tell which steps you have completed	11%	18% A

USE: [If this was available would you use it?](#)

	2007 A (n=907)	2010 B (n=940)
An alarm that could tell you when a door or window has been opened or closed when not expected	62%	59%
Sensors that can be placed in home to detect if someone falls and call for help	60%	67% A
Small electronic devices that can turn off appliances and regulate environment	61% B	56%
An electronic system that lets family know you are okay	62%	59%
A device that tracks steps in food preparation so that if you are interrupted you can tell which steps you have completed	35%	41% A

Source: Healthy @ Home, 2008, Healthy @ Home 2.0, 2011, AARP
Base: Caregivers 45-75

2007 to 2010 Trend Analysis

Awareness of these home safety technology devices has substantially increased for three items:

- *Sensors that can be placed in the home to detect if someone falls and call for help*
- *An electronic system that lets you know if the person you provide care is okay, or if her/his daily routine changed suggesting she/he might need help (such as not getting out of bed as usual). We revised the wording of this item in 2010 to clarify the nature of the technology we are asking about. It is possible that changing the wording influenced respondents' responses to this question.*
- *A device in the kitchen that keeps track of where they are in the process of preparing food so that if they are interrupted it can remind her/him of the steps she/he completed*

The awareness of an alarm that could tell you when a door or window (in their home) has been opened or closed when not expected decreased. While there were minor changes to the wording of this question, it is unlikely to account for the change in awareness.

Willingness to use the technology if it was available substantially increased for two items:

- *Sensors that can be placed in the home to detect if someone falls and call for help*
- *A device in the kitchen that keeps track of where they are in the process of preparing food so that if they are interrupted it can remind her/him of the steps she/he completed.*

Willingness to use the technology if the device was available decreased for only one item which includes small electronic devices that can turn off appliances (such as a stove) when not in use, turn lights on and off as needed, or regulate the temperature.

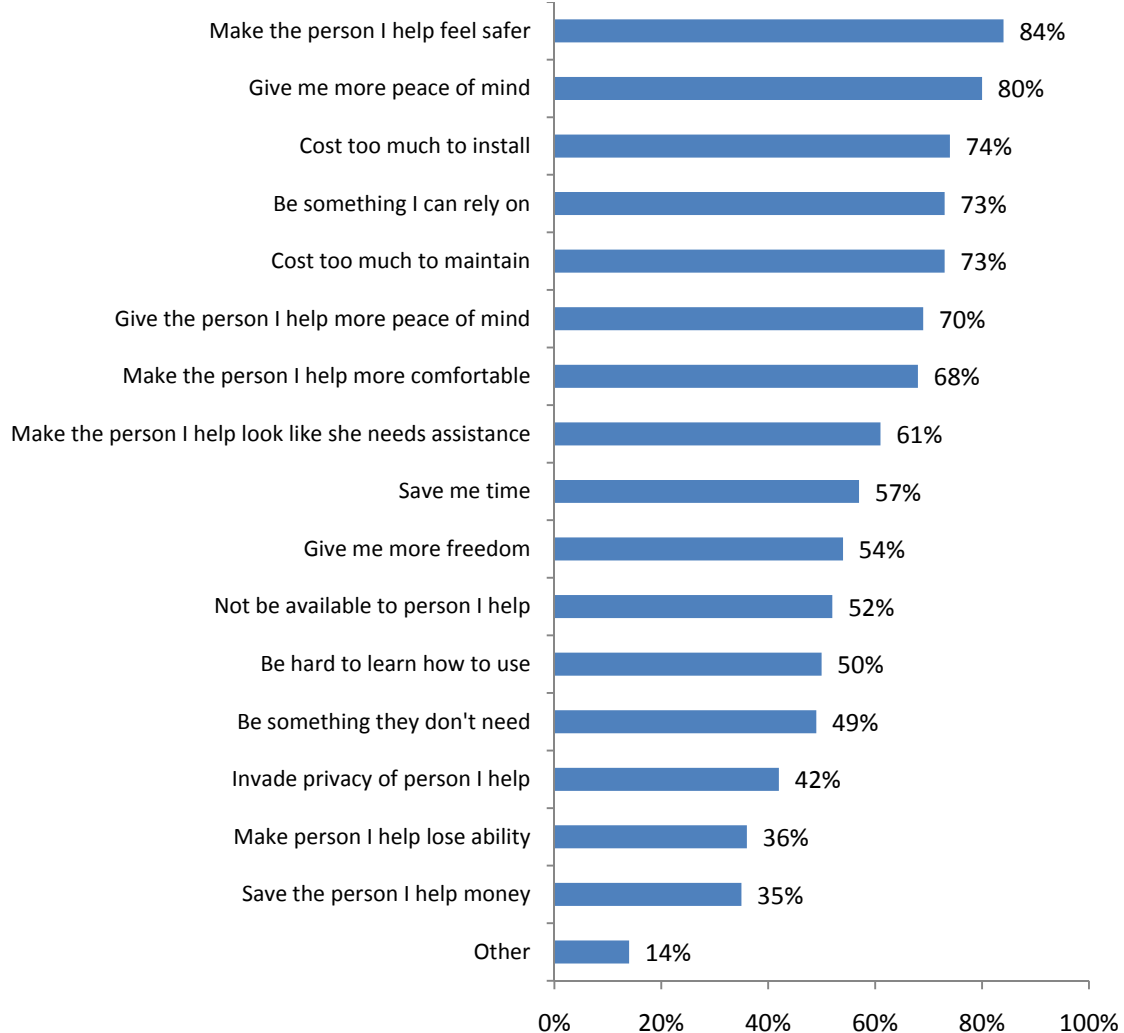
Perceived Benefits and Barriers

More than eight in ten caregivers identify the top benefits of using home safety technology devices as the ability to *make the person I help feel safer* (84%) and to *give me more peace of mind* (80%) (Figure 38). About seven in ten believe these technologies are *something they can rely on* and two-thirds believe these technologies can improve the quality of their care recipients' life (*give the person I help more peace of mind* 70% and *make the person I help more comfortable* 68%). More than half believe it will *save me time* (57%) and *give me more freedom* (54%). Slightly more than one-third of caregivers say these technologies will *save the person I help money*.

On the other hand, almost three-quarters say it will *cost too much to install* (74%) or *cost too much to maintain* (73%). About six in ten are concerned that this will *make the person I help look like he/she needs assistance* (61%). About half say it will *not be available to the person I help* (52%), *that it will be hard to learn how to use* (50%), or *be something the person I help doesn't need* (49%). More than one-third believes these technologies will *make the person I help lose the ability to do things for her or himself* (36%).

Figure 38: Perceptions among Caregivers Regarding Home Safety Technology Devices

Q 13. In general, home safety devices like those mentioned would:



Source: Healthy @ Home 2.0, 2011, AARP
 Base: Caregivers 45-75

2007 to 2010 Trend Analysis

There was considerable stability across the perception of these benefits and barriers between these two studies. One exception, however, is that while a majority of caregivers continue to say these technologies will *save them time*, the proportion of caregivers who say this has shrunk since 2007 (from 65% to 57%) (Figure 39).

Figure 39: Perceived Benefits and Barriers among Caregivers 45 to 75

Q17: In general, home safety technology devices like those mentioned would:³⁰

Perceived Benefits or Barriers	2007 A (n=1023)	2010 B (n=1152)
Make me feel the person I help is safer	86%	84%
Give me more peace of mind	82%	80%
Cost too much to install	75%	74%
Be something I could rely on	74%	73%
Cost too much to maintain	72%	73%
Give the person I help more peace of mind	73%	70%
Make the person I help more comfortable	70%	68%
Make the person I help look like he/she needs assistance	59%	61%
Save me time	65% B*	57%
Give me more freedom	56%	54%
Not be available to the person I help	51%	52%
Be hard to learn how to use	51%	50%
Be something the person I help doesn't need	45%	49%
Invade the privacy of the person I help	43%	42%
Make the person I help lose the ability to do things for her or himself	33%	36%
Save the person I help money	40%b	35%
Other	9%	14%

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
Base: Caregivers 45-75

Customer Service

Approximately three-fourths (77%) of caregivers strongly or somewhat agree that if they used a home safety technology device, it would be important to have a customer service representative available by telephone 24 hours a day 7 days a week to provide assistance if I needed help (Figure 40).

Figure 40: Importance of Customer Service

Q19. If I used a home safety technology device, it would be important to me to have a customer service representative available by telephone 24 hours a day 7 days a week to provide assistance if I needed help.³¹

	2007 A (n=1023)	2010 B (n=1152)
Strongly agree	49% B	40%
Somewhat agree	34%	37%
Somewhat disagree	12%	14%
Strongly disagree	4%	8% A

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
Base: Caregivers 45-75

³⁰ In 2007 this question wording was "In general, home safety devices like those mentioned would:"

³¹ In 2007 the question wording was "If I used home safety devices (like those previously mentioned), it would be important to me to have a customer service representative available by telephone 24 hours a day, 7 days a week, to provide assistance if I needed help using it."

2007 to 2010 Trend Analysis

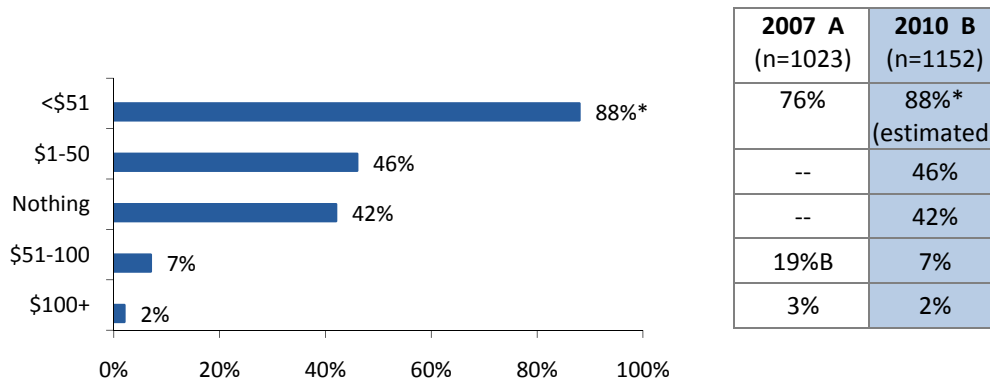
There has been a substantial decrease in the proportion of caregivers who say they *strongly agree* that it is important to them to have 24/7 customer service. Conversely, there has been an increase in the proportion of caregivers who *strongly disagree* with this statement suggesting that caregivers may be getting more comfortable with the idea of using these technologies without constant technological support.

Willingness to Pay

We estimate that eight in ten caregivers would be willing to pay less than \$50 per month to use home safety technology devices (46% willing to pay \$1 to \$50, and 42% willing to pay nothing) (Figure 41).

Figure 41: Willingness to Pay for Home Safety Technology Devices

Q. 19. Overall, how much would you be willing to pay per month to use home safety technology devices?³²



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011

Base: Caregivers 45-75

* (note: in 2010 we sub-divided the <\$50 category into two groups, those who pay nothing and those who would pay \$1-50 and these categories were summed to get an estimate of the proportion willing to pay <\$50.)

2007 to 2010 Trends

The proportion of caregivers who are willing to pay \$51 to 100 per month for home safety technology devices has decreased from about one in five to less than one in ten. Since all Americans experienced an economic recession during this timeframe, it is possible that this is a reflection of the economic pinch most people have experienced.

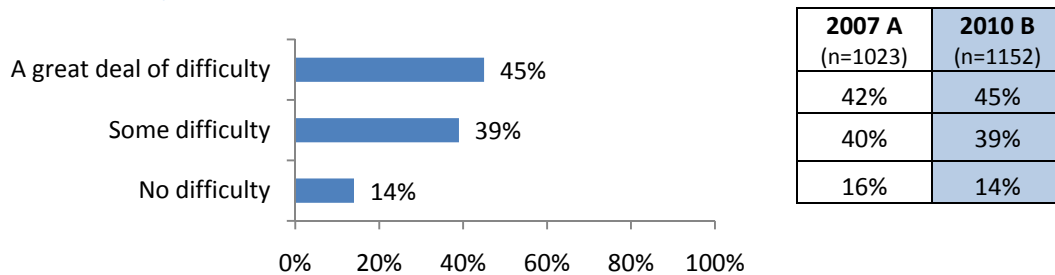
³² In 2007 this question was "Overall, how much would you be willing to pay per month to have these types of home safety devices available to you?"

Perceived Difficulty Persuading Care Recipient to Use

More than four in ten (45%) caregivers believe they will have a *great deal of difficulty* persuading the person they help to use home safety technology devices. Almost four in ten (39%) anticipate *some difficulty* and less than one in ten (14%) anticipate *no difficulty* persuading the person they help to use home safety technology devices (Figure 42).

Figure 42: Perceived Difficulty Persuading Care Recipient to Use Home Safety Technology Devices

Q20. How much difficulty do you think you would have persuading the person you help to use the kinds of home safety devices described previously?



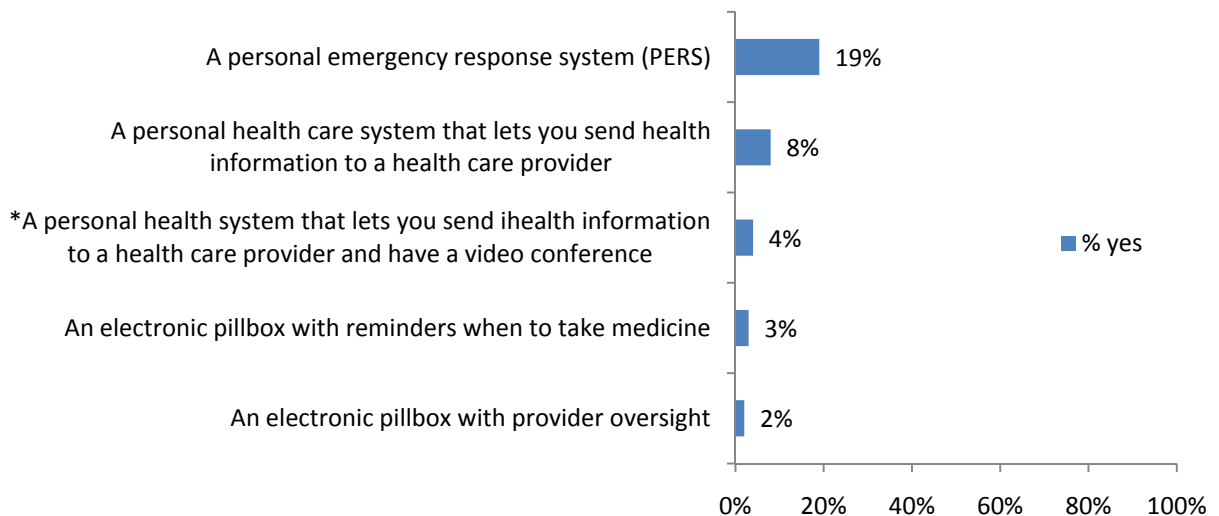
Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
Base: Caregivers 45 -75

XV. Current Use of Personal Health and Wellness Technology

Approximately one in five caregivers say the person they assist uses a personal emergency response system (PERS) (Figure 43). Less than one in ten caregivers say the person they assist uses any of the remaining personal health and wellness technologies we asked about.

Figure 43: Current Use of Personal Health and Wellness Technology

Q16W2. Do you currently use any of the following personal health and wellness technology devices?



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011.
Base: Caregivers 45 - 75

Awareness and Willingness to Use

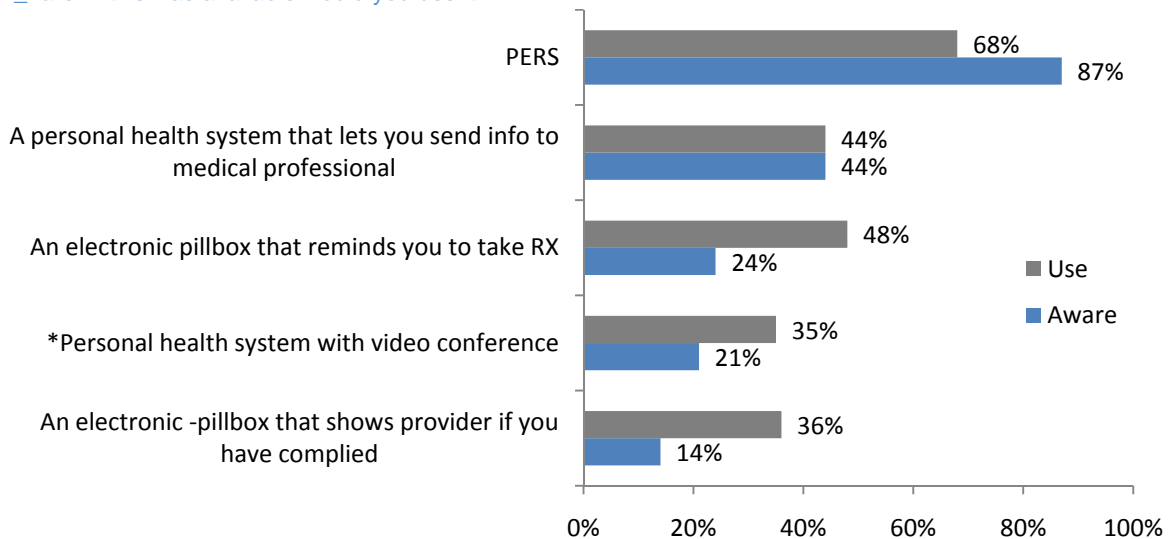
Almost nine in ten (87%) caregivers are *aware* of personal emergency response systems (PERS), while two-thirds (68%) say they are *willing to use* them (for their care recipient) if they were available (Figure 44). An equal share of caregivers say they are *aware* of, and would be *willing to use*, a personal health system that lets them send medical information about themselves (like their blood pressure readings, weight, or how their heart is performing) from their home to a health professional over their telephone lines.

For the remaining three items, caregivers' *willingness to use* these devices if they were available exceeds their current *level of awareness* about these items. This suggests that there could be a pent-up market demand for this type of technology.

Figure 44: Awareness and Willingness to Use Personal Health and Wellness Devices

Q21a-e: Have you heard or read about the following personal health and wellness items?

Q21_1a-e: If this was available would you use it?



Source: Healthy @ Home 2.0, AARP, 2011
Base: Caregivers 45-75

*indicates question wording changed.

Figure 44: continued on next page.

AWARENESS: [heard or read about . .](#)

	2007 A (n=1023)	2010 B (n=1152)
PERS	93%B	87%
A personal health system that lets you send information about themselves (like blood pressure readings, weight, or how their heart is performing) from their home to a health professional over their telephone lines	52%	44%
An electronic pill box that reminds you when to take medicines	21%	24%
A personal health system that does the same thing as the item above, but has a screen and allows you to have a video conference with your health care provider ³³	16%	21%A
An electronic pill box that does the same thing as the item above, but shows a health care provider if you have taken your medications	8%	14%

USE: [If this was available would you use it?](#)

	2007 A (n=1023)	2010 B (n=1152)
PERS	78%B	68%
A personal health system that lets you send information about themselves (like blood pressure readings, weight, or how their heart is performing) from their home to a health professional over their telephone lines	57%B	44%
An electronic pill box that reminds you when to take medicines	61%B	48%
A personal health system that does the same thing as the item above, but has a screen and allows you to have a video conference with your health care provider ³⁴	44%B	35%
An electronic pill box that does the same thing as the item above, but shows a health care provider if you have taken your medications	48%B	36%

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
 Base: Caregivers 45-75

2007 to 2010 Trend Analysis

There has been a decrease in the proportion of caregivers who have heard of PERS (93% in 2007 vs. 87% in 2010) and an increase in the proportion who have heard about personal health systems that lets them send medical information about themselves (like their blood pressure readings, weight, or how their heart is performing) from their home to a health professional over their telephone lines and also has a screen which allows them to have a video conference with their health provider (16% in 2007 and 21% in 2010).

There has been a decrease in the proportion of caregivers who say they would use each of the personal health and wellness items between the last survey and the current survey. Again, it is possible that the economic recession has affected these responses.

³³ In 2007 this question was “A personal health monitoring system that does the same thing as the item above, but is TV-based and allows your doctor to communicate with you.”

³⁴ In 2007 this question was “A personal health monitoring system that does the same thing as the item above, but is TV-based and allows your doctor to communicate with you.”

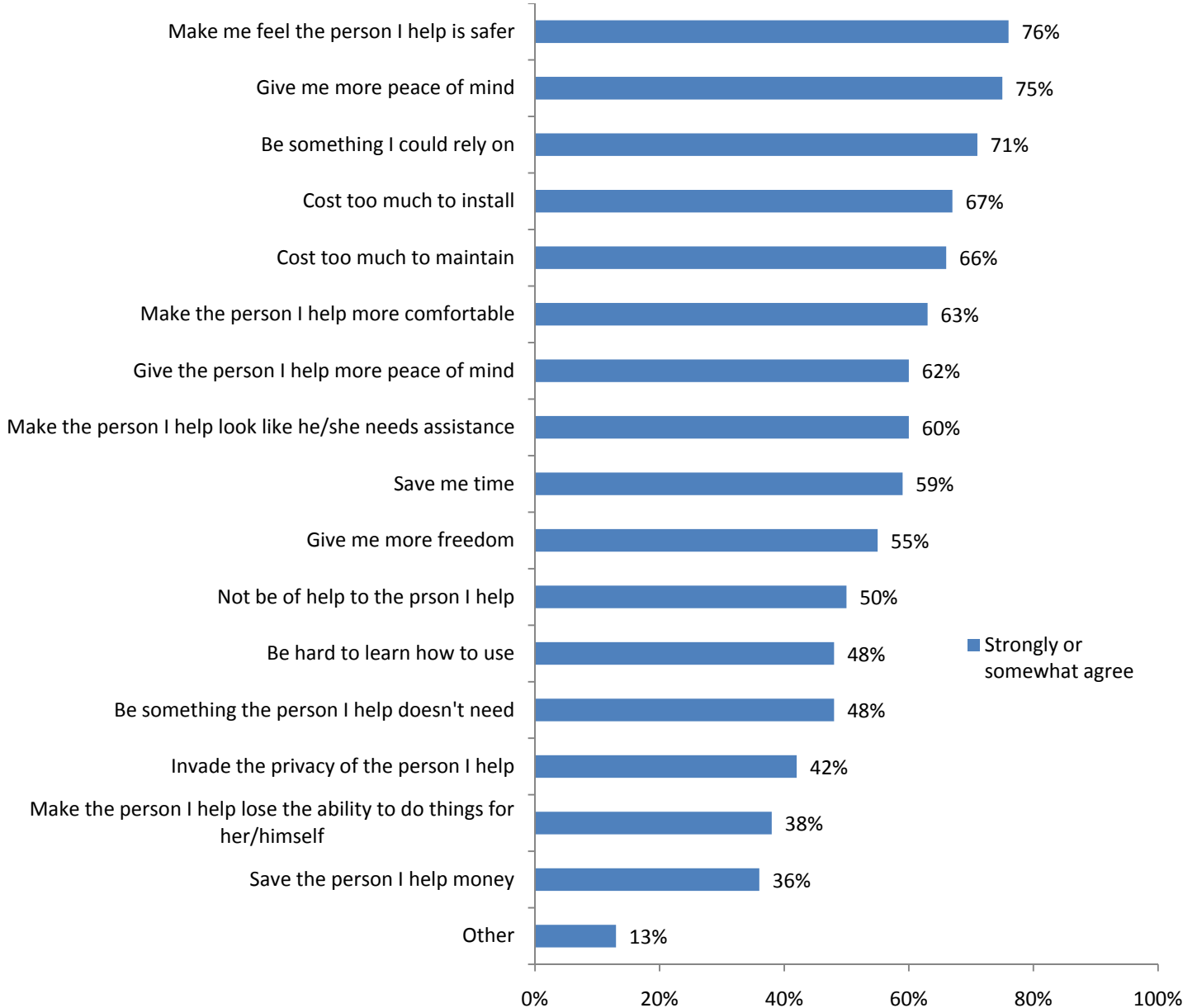
Perceived Benefits and Barriers

Two-thirds of caregivers say the benefits of using personal health and wellness devices include making them feel the person they help is safer (76%) and giving the caregiver more peace of mind (75%) (Figure 45). Seven in ten caregivers believe these devices are things they can rely on (71%). More than six in ten say these devices will make the person they help more comfortable (63%) or give the person they help more peace of mind (62%). More than half of caregivers also see the devices as providing the caregiver more time (59%) and freedom (55%). More than one-third of these caregivers say these devices could save the person they help money.

On the other hand, caregivers also see potential barriers to using personal health and wellness items. Two-thirds of caregivers say these items will cost too much to install (67%) and maintain (66%). Caregivers are also concerned that using these devices will make their care recipient look like they need help (60%). About half believe these devices will not be available to the person they help (50%), they will be hard to learn how to use (48%), or that they may be something the person they help doesn't need (48%). About four in ten caregivers are concerned these devices may invade the privacy of the person they help (42%) or make the person they help lose the ability to do things for her or himself (38%).

Figure 45: Caregivers' Perceptions Regarding Personal Health and Wellness Devices

Q22: In general, personal health and wellness devices like those mentioned would:



Source: Healthy @ Home 2.0, AARP 2011.
Base: Caregivers 45-75

2007 to 2010 Trend Analysis

Six characteristics of personal health and wellness devices remained stable since the last survey (Figure 46). For example, the perceived reliability of the technology was stable, as was the concern that the items would not be available to the person they help, that they would be hard to learn how to use, that they might invade the care recipients' privacy and make the person lose the ability to do things for her or himself.

Despite the fact that many of these devices continued to be viewed positively by the majority of caregivers, the proportion of caregivers who perceived nine benefits or barriers associated with personal health and wellness devices decreased since the last survey (Figure 46), including: *making the caregiver feel the person they help is safer* and *giving them more peace of mind*. Other potential benefits that declined include *making the person they help more comfortable*, and *providing them more peace of mind*. Benefits for the caregiver that declined include *saving them time*, and *giving them more freedom*. It is notable that the perceived *cost of installing* and *the cost of maintaining* these devices declined, even though a majority of caregivers still see costs as a concern.

Figure 46: Perceived Benefits and Barriers among Caregivers 45 to 75

Q22a-g: In general, personal health and wellness devices like those mentioned would:

Perceived Benefits or Barriers	2007 A (n=1023)	2010 B (n=1152)
Make me feel the person I help is safer	86%B*	76%
Give me more peace of mind	82%B	75%
Be something I could rely on	75%	71%
Cost too much to install	73%B	67%
Cost too much to maintain	71%B	66%
Make the person I help more comfortable	70%B	63%
Give the person I help more peace of mind	72%B	62%
Make the person I help look like he/she needs assistance	58%	60%
Save me time	67%B	59%
Give me more freedom	59%B	55%
Not be available to the person I help	51%	50%
Be hard to learn how to use	51%	48%
Be something the person I help doesn't need	41%	48%A*
Invade the privacy of the person I help	42%	42%
Make the person I help lose the ability to do things for her or himself	36%	38%
Save the person I help money	42%B	36%
Other	10%	13%A

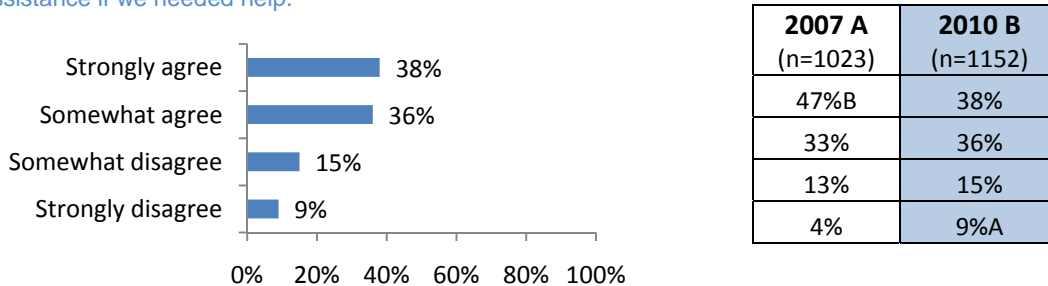
Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
Base: Caregivers 45-75

Importance of Customer Service

Almost three-fourths of caregivers say they strongly agree or somewhat agree that if the used personal health and wellness items it would be important to have a customer service representative available by telephone 24 hours, 7 days a week to provide assistance if they needed it (Figure 47).

Figure 47: Importance of Customer Service

Q23. If the person I helped used personal health and wellness devices (like those mentioned previously), it would be important to me to have a customer service representative available by telephone 24 hours a day 7 days a week to provide assistance if we needed help.



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
Base: Caregivers 45-75

2007 to 2010 Trend Analysis

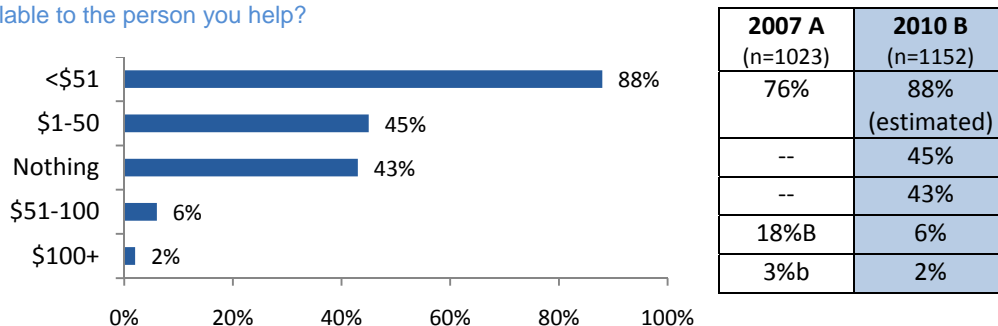
A significantly smaller proportion of caregivers *strongly agree* with the need for 24/7 customer service representative technology support. At the same time, a larger proportion of caregivers *strongly disagree* with this statement suggesting that caregivers are becoming more comfortable with technology.

Willingness to Pay

We estimate that nearly nine in ten caregivers are willing to pay less than \$50 per month for personal health and wellness devices (Figure 48). This includes four in ten who say they would not pay anything for these items. A small minority of caregivers are willing to pay over \$50 per month for these devices.

Figure 48: Willingness to Pay for Personal Health and Wellness Devices

Q24. Overall, how much would you be willing to pay per month to have these types of personal health and wellness devices available to the person you help?



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
Base: Caregivers 45-75

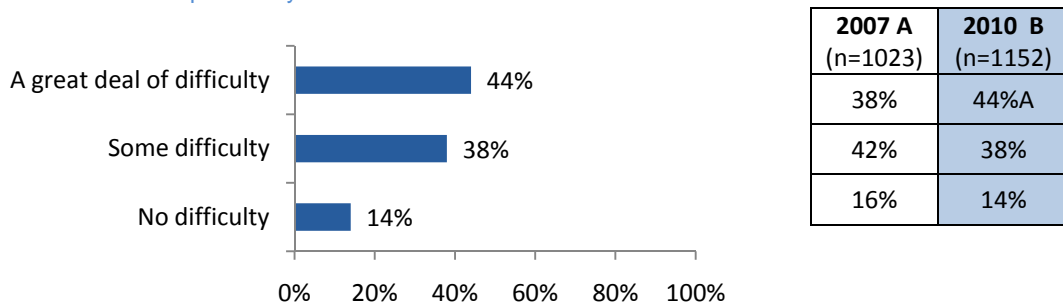
2007 to 2010 Trend Analysis

A substantially smaller proportion of caregivers are willing to pay \$51 to \$100 per month for personal health and wellness devices.

Perceived Difficulty Persuading Care Recipient to Use Personal Health and Wellness Devices

More than eight in ten caregivers say they believe they will have at least some difficulty persuading their care recipient to use the types of personal health and wellness devices we asked about. Slightly more than one in ten says they do not anticipate any difficulty persuading their care recipient to use these items (Figure 49).

Figure 49: Perceived Difficulty Persuading Care Recipient to Use Personal Health & Wellness Devices
Q25. How much difficulty do you think you would have persuading the person you help to use the kinds of personal health and wellness devices previously discussed?



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
Base: Caregivers 45-75

2007 to 2010 Trend Analysis

Substantially more caregivers believe they will have *a great deal of difficulty* persuading the person they provide help to use personal health and wellness technologies compared to the last time we conducted this survey.

XVI. Financial Estimates on Resources Needed and Available

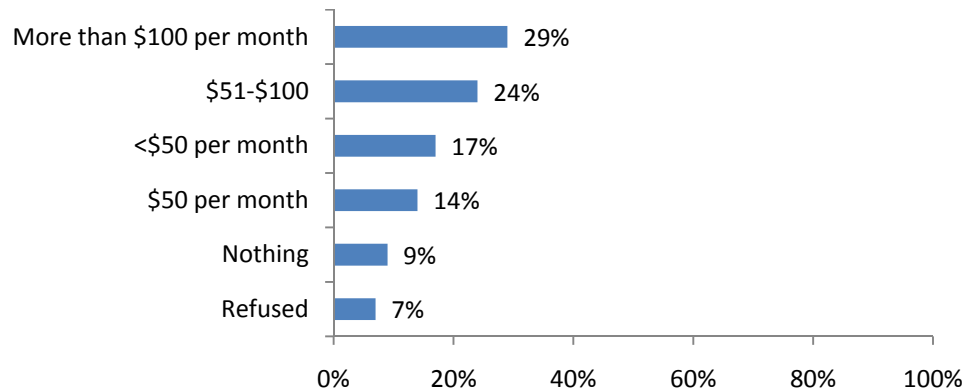
We added two new questions to this iteration of Healthy @ Home to better understand how much caregivers expect to pay for the entire set of technologies we asked about, and how much budget they have for this set of items. First, we asked caregivers to think about all the categories of technology including a computer to maintain contact or get information, home and safety technology items, and personal health and wellness items.

We acknowledged that each of these technologies has a cost (which we asked about separately) and, if some combination of these technologies could enable them to live independently, how much would they expect to pay for them all together in total per month.

The results (Figure 50) show that nearly three in ten caregivers (29%) say they expect to pay more than \$100 per month for some combination of these technologies that could help them live independently. At the opposite extreme, one in ten (9%) expect to pay nothing. In the middle, another three in ten (17% < than \$50 per month and 14% at exactly \$50 per month) expect to pay \$50 or less per month for a combination of technology to meet their needs, and almost one in ten refused to answer the question. This distribution suggests widely varying beliefs about what caregivers expect to pay for some combination of technology to live independently. The median amount (point where half the caregivers were above and half the caregivers were below) is \$100.

Figure 50: How Much would you expect to pay?

Q42w2. We have asked you to think about a variety of technology including: computers with internet connections to stay in touch with other people, home safety technology devices, and personal health and wellness devices. Each of these technologies has a cost. If some combination of these technologies could enable you to live independently, how much would you expect to pay for them all together in total per month?

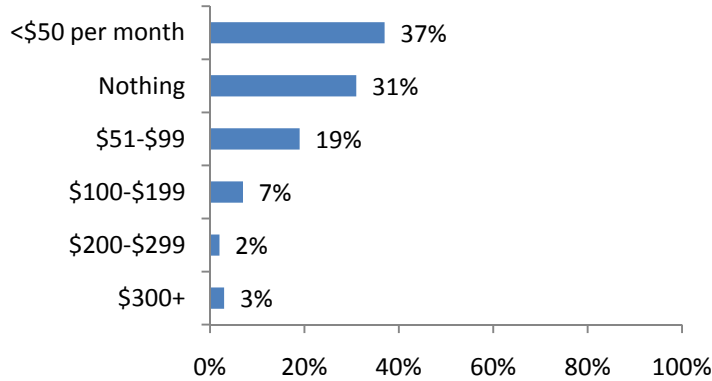


Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
 Base: Caregivers 45-75

We also asked caregivers how much they have available to spend in total per month on these budget items (Figure 51). Almost four in ten said less than \$50 per month, and three in ten said they have nothing available in their budget for these items. About one in five have \$51 to \$99 available per month, and less than one in ten (7%) have \$100 to \$199. Fewer have more than this available to pay per month.

Figure 51: How Much do you Have to Spend on Technology Devices?

Q42aw2. We have asked you to think about a variety of technology including: computers with Internet connections to stay in touch with other people, home safety technology devices, and personal health and wellness devices. Each of these technologies has a cost. If some combination of these technologies could enable you to live independently, how much would you have available to spend in total per month on this budget item?



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
Base: Caregivers 45-75

XVII. Opinions about Telemedicine

We asked a series of four questions about respondents' willingness to use telemedicine for their care recipient under four hypothetical conditions (Figure 52). Two conditions were created by asking caregivers if they would be willing to have their care recipient's heart condition diagnosed electronically from their primary care doctor's office or from their own home. The remaining two conditions were created by asking caregivers if they would be willing to have their care recipient's heart condition monitored (watched) electronically from their primary care doctor's office or from their own home.

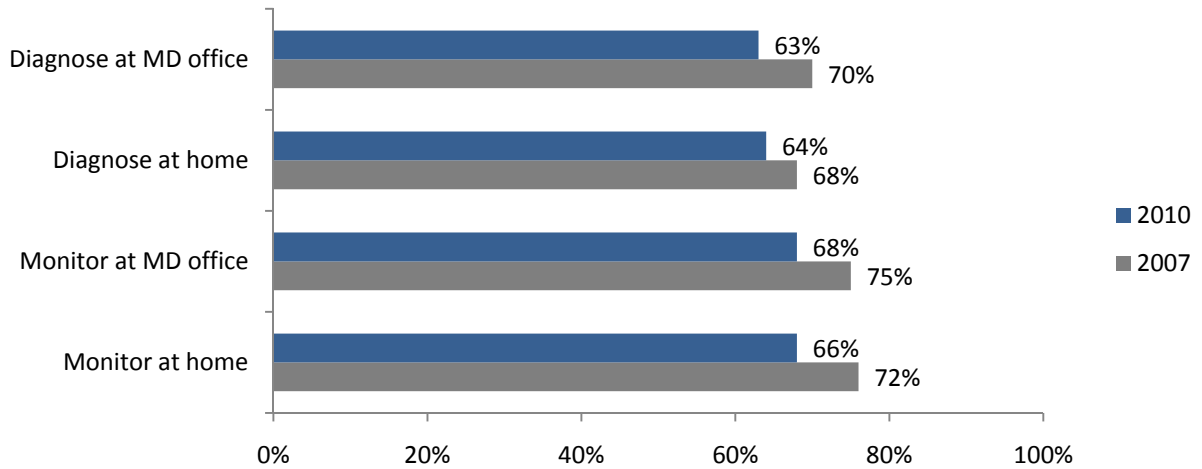
Figure 52: Willingness to Use Telemedicine under Four Conditions

Q26. How willing would you be to have a cardiologist (heart doctor) diagnose how the heart of the person you help is working by receiving information that is transmitted electronically to them from the primary (family) doctor's office?

Q27. How willing would you be to have a cardiologist (heart doctor) diagnose how the heart of the person you help is working by receiving information that is transmitted electronically to them from their own home?

Q28. How willing would you be to have a cardiologist (heart doctor) provide follow-up care by monitoring (watching) how the heart of the person you help is working by receiving information that is transmitted electronically to them from the primary (family) doctor's office?

Q29. How willing would you be to have a cardiologist (heart doctor) provide follow-up care by monitoring (watching) how the heart of the person you help is working by receiving information that is transmitted electronically to them from their home?



Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
Base: Caregivers 45-75

2007 to 2010 Trend Analysis

Even though the majority of caregivers are still willing to participate in telemedicine for the person they help, the proportion of caregivers who are willing to participate decreased significantly in three out of the four categories from 2007. The one form of telemedicine that did not change significantly, was the willingness to have a cardiologist *diagnose the care recipient's heart condition from their home*.

XVIII. Conclusions and Recommendations

- Stop calling people who assist those 50+ “caregivers”. Instead, appeal to them in their other life roles, or AARP segments, and address their needs helping family, friends, or themselves with time management, financial management, and emotional or communication issues. Recognize that family relationships can have a dark side which emerges under the stress of caring for an older adult.
- Identify ways to help “caregivers” determine when the person they help is moving to a new level which may require more help, or different types of help.
- Consider whether the personal computer market has been saturated and reached its natural limits for “caregiving” purposes.
- Address the home safety needs associated with alarms that can alert a caregiver when a door or window has been opened unexpectedly, perhaps indicating that the person they assist is wandering out of their home environment.
- Focus more attention on the use of small electronic devices that can regulate the home environment for safety (turn stove off when not in use), convenience (turning lights on and off automatically), and comfort (regulating the temperature). Such home devices appeal to “caregivers” and help them meet the needs of the person they help. At the same time, they are potentially affordable.
- Develop ways to address caregivers concerns about different types of food issues they have with the people they assist.
- Focus more attention on the use of technology to help caregivers with scheduling and time management.
- Medication management is another frequently mentioned need and the electronic pill boxes we asked about were well received and potentially affordable.
- Grapple with the issue that finances are often a problem for “caregivers” and the people they assist. Focusing on their underlying needs may require us to re-think the types of technologies that are being developed and whether or not they will meet the “caregivers” perceived needs and fit within their budget.

Appendices

Caregivers' Charts

In order to understand the different types of experience caregivers have, we used a level of burden index to measure intensity of their role. We based the index on the amount of time a caregiver spends providing assistance to a care recipient in a typical week, and the number/types of caregiving activities they perform. Using this index we divided our caregivers into five consecutive levels of burden. Level one represents the lowest number of hours spent caregiving and the lightest tasks and level five represents the highest number of hours spent caregiving and the heaviest tasks.

Caregivers' Level of Burden

Caregivers in the middle and higher levels of caregiver burden are more likely to be willing to use a personal computer to perform a variety of tasks such as help find or coordinate services for the person they provide care or communicate with family and friendly by e-mail (see table below).

Proportion of Caregivers Willing to Use Personal Computer by Level of Burden

Item	2007 Total A	2010 Total B	Level 1 C	Level 2 D	Level 3 E	Level 4 F	Level 5 G
Search for health information on Internet	87%	85%	82%	86%	84%	89%G	83%
Help Find or coordinate services for person I provide care	74%B	56%	48%	56%	59%C	62%C	63%C
Communicate with family and friends by e-mail	--	91%	91%	93%G	93%G	90%G	79%

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
 Base: Caregivers 45-75
 *small base

Shaded cells in the table indicate there is a statistically significant difference between these cells and those represented by the capital letters next to the percentage. For example, level 4 caregivers are significantly more likely to be willing to use sensors in floor to detect falls than level 1 and level 5 caregivers.

Caregivers in the middle to upper middle levels of burden are more likely to see the benefits such as *being something I can rely on*, make me feel the person is safer, give me more peace of mind, give the person I help more peace of mind than caregivers at the highest level of burden.

Item	2007 Total A	2010 Total B	Level 1 C	Level 2 D	Level 3 E	Level 4 F	Level 5 G
Make me feel person is safer	86%	84%	80%	85%	82%	90% CEG	76%
Save the person I help money	40%	35%	35%	27%	37%	41%	30%
Give me more peace of mind	82%	80%	76%	77%	83%	85% Cdg	74%
Give the person I help more peace of mind	73%	70%	67%	72%	72% g	74% G	59%
Be something I can rely on	74%	73%	73%	70%	77% G	76% G	62%
Not be available to the person I help	51%	52%	48%	50%	54%	59% CG	41%
Be hard to learn how to use	51%	50%	52% G	48% g	50% G	54% G	34%
Make the person I help look like he/she needs assistance	59%	61%	66% G	57%	67% FG	56%	52%
Make the person I help lose the ability to do things	33%	36%	40% F	37%	41% F	30%	32%
Be something the person doesn't need	45%	49%	56% F	48%	50%	40%	49%

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011

Base: Caregivers 45-75

*small base

Shaded cells in the table indicate there is a statistically significant difference between these cells and those represented by the capital letters next to the percentage. For example, level 4 caregivers are significantly more likely to see the benefits of using these devices because it makes them feel the person they help is safer, gives them more peace of mind than caregivers at a low level of burden.

Caregivers in the middle and higher level of burden categories are more likely to be willing to use home safety technology devices than caregivers at other levels (see table below).

Proportion of Caregivers Willing to Use Home Safety Devices by Level of Burden

Item	2007 Total A	2010 Total B	Level 1 C	Level 2 D	Level 3 E	Level 4 F	Level 5 G
Sensors in floor to detect falls	60%	67% A	63%	76%	72% G	73% CG	56%
Small devices to regulate environment	61% B	56%	48%	56%	60% C	63% C	53%
Device that lets caregiver know if recipient's routine changes	62%	59%	53%	56%	66% CG	64% Cg	49%
Alarm that tells if door/window has opened/closed unexpectedly	62%	59%	50%	55%	61% C	70% CD	58%
Kitchen device that records and reports steps taken while cooking as a reminder to cook	35%	41% A	35%	34%	44% c	51% CD	38%

Source: Healthy @ Home, 2008, and Healthy @ Home 2.0, AARP, 2011
 Base: Caregivers 45-75
 *small base

Shaded cells in the table indicate there is a statistically significant difference between these cells and those represented by the capital letters next to the percentage. For example, level 4 caregivers are significantly more likely to be willing to use sensors in floor to detect falls than level 1 and level 5 caregivers.

Appendix A: Annotated Questionnaire for 65 + segment

AARP Caregivers Survey (65+) 2007 / 2010 Annotated Questionnaire

2010 Survey
N assigned interviews: 1,281

Field period: 11/11/10 – 11/29/10
N completes: 940 N qualified respondents: 940

All results include qualified respondents and are weighted. “Refused” responses are not counted towards the bases. Consequently, these numbers may slightly differ from the numbers in the report.

Please tell us how much you agree or disagree with the following statements.

Q3a. What I'd really like to do is continue living on my own for as long as possible.

	2007 (n = 907)	2010 (n = 940)
Strongly Agree	91.7%	89.1%
Somewhat Agree	6.8%	7.2%
Somewhat Disagree	1.1%	1.0%
Strongly Disagree	0.5%	2.8%

Q3b. I would pay for services that could help me stay in my own home if I needed help.

	2007 (n = 907)	2010 (n = 940)
Strongly Agree	61.0%	46.0%
Somewhat Agree	34.0%	46.2%
Somewhat Disagree	4.2%	5.7%
Strongly Disagree	0.9%	2.0%

Q3c. If I need help to stay in my own home, I'll be willing to give up some of my privacy to do that.

	2007 (n = 907)	2010 (n = 940)
Strongly Agree	39.3%	30.1%
Somewhat Agree	48.3%	51.5%
Somewhat Disagree	10.2%	13.6%
Strongly Disagree	2.3%	4.8%

Q3d. I like to know as much as I can about my health conditions.

	2007 (n = 907)	2010 (n = 940)
Strongly Agree	82.9%	79.5%
Somewhat Agree	15.9%	16.5%
Somewhat Disagree	1.2%	2.4%
Strongly Disagree	0.0%	1.6%

Please tell us how much you agree or disagree with the following statements.
 Q3e. I would like to help my doctor monitor my health.

	2007 (n = 907)	2010 (n = 940)
Strongly Agree	74.9%	67.1%
Somewhat Agree	21.6%	28.0%
Somewhat Disagree	2.8%	2.2%
Strongly Disagree	0.7%	2.7%

NEW

If Q3a = "Strongly Agree" or "Agree - ask Q2aw2 and Q2bw2

Q2aw2. What will you need in the next five years to live on your own? (open ended question with text box.)

Q2bw2. What changes, if any, will you need to make to your home to live on your own in the next five years? (open-ended question with text box.)

Ask all:

Q3aw2. How important is it to you to stay in touch with your family members in the next five years? (check one)

	2010 (n = 940)
Very important	85.4%
Somewhat important	9.3%
Not very important	4.0%
Not at all important	1.3%

If Q3aw2. is "very important or somewhat important" ask Q3bw2:

Q3bw2. What is the best way for you to maintain contact with your family members in the next five years? (open ended question with text box).

Ask All:

Sometimes people have difficulty getting around their home or performing certain tasks. Please indicate how difficult it is to complete each of the following tasks:

Q4a. Get in and out of bed

	2007 (n=907)	2010 (n = 940)
Not at all difficult	85.0%	87.0%
Somewhat Difficult	13.5%	12.2%
Very Difficult	1.0%	0.3%
Cannot do alone	0.5%	0.5%

Q4b. Get dressed

	2007 (n=907)	2010 (n = 940)
Not at all difficult	87.6%	88.6%
Somewhat Difficult	11.0%	10.3%
Very Difficult	0.8%	0.8%
Cannot do alone	0.6%	0.3%

Please indicate whether you need help and if so whether someone helps you with the following tasks:
 Q4c. Go up or down stairs

	2007 (n =907)	2010 (n = 940)
Not at all difficult	59.7%	62.3%
Somewhat Difficult	29.5%	29.7%
Very Difficult	8.5%	6.0%
Cannot do alone	2.2%	2.0%

Q4d. Get in and out of the bathtub or shower

	2007 (n =907)	2010 (n =900)
Not at all difficult	71.4%	78.4%
Somewhat Difficult	23.7%	17.4%
Very Difficult	3.3%	3.3%
Cannot do alone	1.6%	0.9%

Q4e. Use the toilet

	2007 (n=907)	2010 (n=940)
Not at all difficult	92.4%	93.7%
Somewhat Difficult	6.6%	4.8%
Very Difficult	0.5%	1.3%
Cannot do alone	0.5%	0.2%

Q4f. Eat by myself

	2007 (n=907)	2010 (n=940)
Not at all difficult	97.7%	96.1%
Somewhat Difficult	1.4%	3.1%
Very Difficult	0.6%	0.6%
Cannot do alone	0.2%	0.2%

Q4g. Remembering to take my medications

	2007 (n=907)	2010 (n=940)
Not at all difficult	85.3%	85.6%
Somewhat Difficult	12.9%	11.0%
Very Difficult	1.4%	2.1%
Cannot do alone	0.4%	1.3%

Q5a. Pay bills/fill out insurance claims

	2007 (n=907)	2010 (n=940)
Not at all difficult	81.1%	82.5%
Somewhat Difficult	14.5%	13.3%
Very Difficult	2.1%	1.5%
Cannot do alone	2.3%	2.7%

Q5b. Shop for groceries

	2007 (n=907)	2010 (n=940)
Not at all difficult	81.8%	80.7%
Somewhat Difficult	12.5%	14.5%
Very Difficult	2.6%	1.7%
Cannot do alone	3.0%	3.1%

Q5c. Do housework (like doing dishes, laundry, or straightening up)

	2007 (n=907)	2010 (n=940)
Not at all difficult	73.1%	78.2%
Somewhat Difficult	20.2%	16.8%
Very Difficult	3.9%	2.5%
Cannot do alone	2.8%	2.5%

Q5d. Prepare meals

	2007 (n=907)	2010 (n=940)
Not at all difficult	78.3%	83.8%
Somewhat Difficult	16.2%	11.9%
Very Difficult	3.4%	2.3%
Cannot do alone	2.0%	1.9%

Q5e. Drive or get transportation from place to place

	2007 (n=907)	2010 (n=940)
Not at all difficult	82.6%	81.1%
Somewhat Difficult	11.0%	12.9%
Very Difficult	2.5%	2.0%
Cannot do alone	3.9%	4.0%

Q5f. Arrange or supervise services from an agency, such as nurses or aides

	2007 (n=907)	2010 (n=940)
Not at all difficult	73.6%	82.3%
Somewhat Difficult	18.3%	11.4%
Very Difficult	4.3%	2.3%
Cannot do alone	3.9%	3.9%

Do you have any of the following conditions?

Q6a. Low vision or hearing impairment

	2007 (n=907)	2010 (n=940)
Yes	39.0%	31.9%
No	61.0%	68.1%

Do you have any of the following conditions?

Q6b. A condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting or carrying

	2007 (n = 907)	2010 (n = 940)
Yes	34.3%	27.7%
No	65.7%	72.3%

Q6c. Problems learning, remembering, or concentrating

	2007 (n = 907)	2010 (n = 940)
Yes	15.1%	13.3%
No	84.9%	86.7%

Q7. Would you say your health is:

	2007 (n = 907)	2010 (n = 940)
Excellent	13.1%	13.5%
Good	60.6%	64.0%
Fair	22.1%	18.8%
Poor	4.3%	3.7%

We would like to know about your experiences using a *personal computer* in different ways. Do you currently use a personal computer to:

Q8w2a. see and hear people living in different places and carry on a conversation with them

	2010 (n = 940)
Yes	21.5%
No	78.5%

Q8w2b. play games, like a card game, with people living in different places just for fun

	2010 (n = 940)
Yes	19.6%
No	80.4%

Q8w2c. search for health information on the Internet

	2010 (n = 940)
Yes	48.0%
No	52.0%

Q8w2d. communicate with family and friends by e-mail

	2010 (n = 940)
Yes	66.6%
No	33.4%

For the 2010 data, users are included in the base of the heard / would use questions to match the format of the 2007 survey.

Have you ever heard or read about using a personal computer to:

Q8a. see and hear people living in different places and carry on a conversation with them

	2007 (n = 907)	2010 (n = 940)
Yes	52.7%	71.3%
No	47.3%	28.7%

Q8b. play games, like a card game, with people living in different places just for fun

	2007 (n = 907)	2010 (n = 940)
Yes	69.2%	69.0%
No	30.8%	31.0%

Q8c. search for health information on the Internet

	2007 (n = 907)	2010 (n = 940)
Yes	89.0%	85.0%
No	11.0%	15.0%

NEW

Q8d. Communicate with family and friends by e-mail:

	2010 (n = 940)
Yes	91.2%
No	8.8%

If this was available, would you use a personal computer to:

Q8_1a. See and hear people living in different places and carry on a conversation with them

	2007 (n=907)	2010 (n=940)
Yes	56.4%	57.9%
No	43.6%	42.1%

Q8_1b. play games, like a card game, with people living in different places just for fun

	2007 (n=907)	2010 (n=940)
Yes	41.3%	41.6%
No	58.7%	58.4%

Q8_1c. search for health information on the Internet

	2007 (n=907)	2010 (n=940)
Yes	85.1%	74.2%
No	14.9%	25.8%

(NEW)

Q8_1d. Communicate with family and friends by e-mail:

	2010 (n = 940)
Yes	86.3%
No	13.7%

Previously we asked about using a *personal computer* to stay in touch with others or get information. In general, using a *personal computer* to stay in touch with others or get information would:

Q9a. make me feel safer

	2007 (n=907)	2010 (n=940)
Strongly Agree	14.8%	6.7%
Somewhat Agree	53.0%	39.7%
Somewhat Disagree	26.7%	36.9%
Strongly Disagree	5.5%	16.6%

Q9b. save me time

	2007 (n=907)	2010 (n=940)
Strongly Agree	28.0%	20.1%
Somewhat Agree	45.9%	49.5%
Somewhat Disagree	21.4%	22.2%
Strongly Disagree	4.6%	8.2%

Q9c. save me money

	2007 (n=907)	2010 (n=940)
Strongly Agree	24.5%	12.9%
Somewhat Agree	37.2%	42.3%
Somewhat Disagree	32.0%	32.7%
Strongly Disagree	6.3%	12.1%

Q9d. make me more comfortable

	2007 (n=907)	2010 (n=940)
Strongly Agree	18.7%	12.3%
Somewhat Agree	49.9%	45.0%
Somewhat Disagree	25.9%	31.0%
Strongly Disagree	5.6%	11.6%

Q9e. give me more peace of mind

	2007 (n=907)	2010 (n=940)
Strongly Agree	18.9%	9.7%
Somewhat Agree	47.3%	41.8%
Somewhat Disagree	27.8%	37.5%
Strongly Disagree	6.0%	11.0%

Q9f. give my family/friends more peace of mind

	2007 (n=907)	2010 (n=940)
Strongly Agree	22.1%	14.9%
Somewhat Agree	51.7%	48.0%
Somewhat Disagree	21.9%	27.0%
Strongly Disagree	4.2%	10.1%

In general, using a *personal computer* to stay in touch with others or get information would:
 Q9g. be something I could rely on

	2007 (n=907)	2010 (n=940)
Strongly Agree	20.6%	13.2%
Somewhat Agree	47.6%	48.3%
Somewhat Disagree	26.4%	29.1%
Strongly Disagree	5.4%	9.4%

Q9h. not be available to me

	2007 (n=907)	2010 (n=940)
Strongly Agree	6.1%	1.8%
Somewhat Agree	33.2%	25.1%
Somewhat Disagree	40.5%	38.6%
Strongly Disagree	20.3%	34.5%

Q9i. cost too much to install

	2007 (n=907)	2010 (n=940)
Strongly Agree	12.5%	10.3%
Somewhat Agree	50.2%	30.0%
Somewhat Disagree	26.9%	37.8%
Strongly Disagree	10.4%	22.0%

Q9j. cost too much to maintain

	2007 (n=940)	2010 (n=940)
Strongly Agree	12.3%	10.6%
Somewhat Agree	47.2%	32.7%
Somewhat Disagree	30.1%	36.3%
Strongly Disagree	10.5%	20.4%

Q9k. be hard to learn how to use

	2007 (n=907)	2010 (n=940)
Strongly Agree	13.5%	11.7%
Somewhat Agree	41.9%	33.3%
Somewhat Disagree	33.2%	33.5%
Strongly Disagree	11.4%	21.6%

Q9l. invade my privacy too much

	2007 (n=907)	2010 (n=940)
Strongly Agree	9.7%	7.7%
Somewhat Agree	38.3%	34.1%
Somewhat Disagree	37.2%	34.2%
Strongly Disagree	14.8%	24.0%

In general, using a *personal computer* to stay in touch with others or get information would:

Q9m. make me look like I need help

	2007 (n=907)	2010 (n=940)
Strongly Agree	5.8%	3.1%
Somewhat Agree	29.5%	19.1%
Somewhat Disagree	47.1%	43.8%
Strongly Disagree	17.6%	34.0%

Q9n. make me lose the ability to do things for myself

	2007 (n=907)	2010 (n=940)
Strongly Agree	5.8%	1.4%
Somewhat Agree	19.7%	13.7%
Somewhat Disagree	51.7%	43.6%
Strongly Disagree	22.9%	41.4%

Q9o. not be something I need

	2007 (n=907)	2010 (n=940)
Strongly Agree	15.4%	10.6%
Somewhat Agree	43.1%	38.3%
Somewhat Disagree	31.6%	29.0%
Strongly Disagree	9.8%	22.2%

Q9p. other: please specify

	2007 (n=907)	2010 (n=940)
Strongly Agree	18.2%	28.2%
Somewhat Agree	29.7%	19.5%
Somewhat Disagree	34.1%	23.7%
Strongly Disagree	18.0%	28.5%

Q10. If I used a *personal computer* to stay in touch with other people, it would be important to me to have a customer service representative available by telephone 24 hours a day 7 days a week to provide assistance if I needed help using it.

	2007 (n=907)	2010 (n=940)
Strongly Agree	32.8%	25.2%
Somewhat Agree	37.0%	36.1%
Somewhat Disagree	19.3%	22.2%
Strongly Disagree	10.9%	16.5%

Q11. Overall, how much would you be willing to pay per month to use a *personal computer* to stay in touch with other people?

	2007 (n=907)	2010 (n=940)
Nothing	NA	45.4%
\$1 to \$50	NA	48.8%
Less than \$50	93.6%	NA
\$51 - \$100	6.1%	5.4%
More than \$100	0.4%	0.4%

(NEW)

We would like to know about your experience with some *home safety technology devices*

Do you currently use any of the following home safety technology devices?

Q12w2a. sensors placed throughout your home to detect if someone falls and, if so, calls for emergency help:

	2010 (n = 940)
Yes	5.3%
No	94.7%

Q12w2b. small electronic devices that can turn off appliances (such as stove) when not in use, turn lights on and off as needed, regulate the temperature?

	2010 (n = 940)
Yes	10.6%
No	89.4%

Q12w2c. An electronic system that lets a family member or friend know if you are okay, or if your daily routine changes suggesting you might need help (such as getting out of bed as usual)

	2010 (n = 940)
Yes	1.8%
No	98.2%

Q12w2d. An alarm that could tell you when a door or window (in your home) has been opened or closed when not expected

	2010 (n = 940)
Yes	16.7%
No	83.3%

Q12w2e. A device in the kitchen that keeps track of where you are in the process of preparing food so that if you are interrupted it can remind you of the steps you already completed

	2010 (n = 940)
Yes	2.8%
No	97.2%

For the 2010 data, users are included in the base of the heard / would use questions to match the format of the 2007 survey.

Have you heard or read about the following home safety items?

Q12a. sensors placed throughout your home to detect if someone falls and, if so, calls for emergency help: (Reworded from 2007)

	2007 (n = 907)	2010 (n=940)
Yes	21.2%	53.2%
No	78.8%	46.8%

Have you heard or read about the following home safety technology devices?

Q12b. small electronic devices that can turn off appliances (such as stove) when not in use, turn lights on and off as needed, regulate the temperature

	2007 (n=907)	2010 (n=940)
Yes	40.7%	42.9%
No	59.3%	57.1%

Have you heard or read about the following home safety technology devices?

Q12c. an electronic system that lets a family member or friend know if you are okay, or if your daily routine changes suggesting you might need help (such as not getting out of bed as usual)
(Reworded from 2007)

	2007 (n=907)	2010 (n=940)
Yes	36.3%	40.8%
No	63.7%	59.2%

Q12d. an alarm that could tell you when a door or window (in your home) has been opened or closed when not expected (reworded from 2007)

	2007 (n=907)	2010 (n=940)
Yes	65.1%	65.0%
No	34.9%	35.0%

Q12e. a device in the kitchen that keeps track of where you are in the process of preparing food so that if you are interrupted it can remind you of the steps you already completed (reworded from 2007)

	2007 (n=907)	2010 (n=940)
Yes	6.3%	16.8%
No	93.7%	83.2%

If this was available, would you use it?

Q12_1a. sensors placed throughout your home to detect if someone falls and, if so, calls for emergency help (reworded from 2007)

	2007 (n=907)	2010 (n=940)
Yes	40.9%	51.2%
No	59.1%	48.8%

Q12_1b. small electronic devices that can turn off appliances (such as stove) when not in use, turn lights on and off as needed, regulate the temperature

	2007 (n=907)	2010 (n=940)
Yes	52.7%	49.0%
No	47.3%	51.0%

Q12_1c. an electronic system that lets a family member or friend know if you are okay, or if your daily routine changes suggesting you might need help (such as not getting out of bed as usual) (reworded from 2007)

	2007 (n=907)	2010 (n=940)
Yes	56.3%	47.3%
No	43.7%	52.7%

If this was available, would you use it?

Q12_1d. an alarm that could tell you when a door or window (in your home) has been opened or closed when not expected (reworded from 2007)

	2007 (n=907)	2010 (n=940)
Yes	68.5%	57.0%
No	31.5%	43.0%

Q12_1e. a device in the kitchen that keeps track of where you are in the process of preparing food so that if you are interrupted it can remind you of the steps you already completed (reworded from 2007)

	2007 (n=907)	2010 (n=940)
Yes	20.2%	27.2%
No	79.8%	72.8%

Previously we asked about a variety of *home safety technology devices*. Please think about these technology devices in general and tell us how much you agree or disagree with the following statements.

In general, *home safety technology devices* like those mentioned would: (minor rewording)

Q13a. make me feel safer

	2007 (n=907)	2010 (n=940)
Strongly Agree	31.3%	24.0%
Somewhat Agree	53.6%	54.8%
Somewhat Disagree	12.3%	13.8%
Strongly Disagree	2.8%	7.3%

Q13b. save me time

	2007 (n=907)	2010 (n=940)
Strongly Agree	16.8%	9.9%
Somewhat Agree	39.9%	36.0%
Somewhat Disagree	36.2%	38.1%
Strongly Disagree	7.2%	16.1%

Q13c. save me money

	2007 (n=907)	2010 (n=940)
Strongly Agree	10.1%	7.1%
Somewhat Agree	27.3%	21.7%
Somewhat Disagree	46.6%	44.3%
Strongly Disagree	15.9%	26.9%

In general, *home safety technology devices* like those mentioned would:
 Q13d. make me more comfortable

	2007 (n=907)	2010 (n=940)
Strongly Agree	25.8%	17.3%
Somewhat Agree	51.6%	56.2%
Somewhat Disagree	17.0%	17.3%
Strongly Disagree	5.6%	9.2%

Q13e. give me more peace of mind

	2007 (n=907)	2010 (n=940)
Strongly Agree	27.5%	20.4%
Somewhat Agree	51.8%	53.6%
Somewhat Disagree	16.0%	17.2%
Strongly Disagree	4.6%	8.7%

Q13f. give my family/friends more peace of mind

	2007 (n=907)	2010 (n=940)
Strongly Agree	33.0%	23.6%
Somewhat Agree	50.5%	55.5%
Somewhat Disagree	12.7%	13.4%
Strongly Disagree	3.9%	7.5%

Q13g. be something I could rely on

	2007 (n=907)	2010 (n=940)
Strongly Agree	26.0%	18.4%
Somewhat Agree	47.7%	51.5%
Somewhat Disagree	21.4%	21.1%
Strongly Disagree	4.9%	8.9%

Q13h. not be available to me

	2007 (n=907)	2010 (n=940)
Strongly Agree	9.7%	9.2%
Somewhat Agree	42.3%	31.9%
Somewhat Disagree	36.3%	43.2%
Strongly Disagree	11.7%	15.8%

Q13i. cost too much to install

	2007 (n=907)	2010 (n=940)
Strongly Agree	23.5%	24.7%
Somewhat Agree	58.9%	54.3%
Somewhat Disagree	14.3%	14.8%
Strongly Disagree	3.3%	6.3%

In general, *home safety technology devices* like those mentioned would:

Q13j. cost too much to maintain

	2007 (n=907)	2010 (n=940)
Strongly Agree	21.9%	25.4%
Somewhat Agree	58.2%	52.6%
Somewhat Disagree	16.4%	15.8%
Strongly Disagree	3.5%	6.2%

Q13k. be hard to learn how to use

	2007 (n=907)	2010 (n=940)
Strongly Agree	11.3%	8.3%
Somewhat Agree	36.5%	36.5%
Somewhat Disagree	42.2%	39.7%
Strongly Disagree	10.0%	15.5%

Q13l. invade my privacy too much

	2007 (n=907)	2010 (n=940)
Strongly Agree	12.0%	9.2%
Somewhat Agree	40.4%	35.4%
Somewhat Disagree	37.9%	40.6%
Strongly Disagree	9.7%	14.7%

Q13m. make me look like I need help

	2007 (n=907)	2010 (n=940)
Strongly Agree	13.1%	11.8%
Somewhat Agree	47.2%	46.9%
Somewhat Disagree	30.6%	28.9%
Strongly Disagree	9.1%	12.5%

Q13n. make me lose the ability to do things for myself

	2007 (n=907)	2010 (n=940)
Strongly Agree	12.6%	9.5%
Somewhat Agree	31.0%	33.4%
Somewhat Disagree	43.6%	40.0%
Strongly Disagree	12.8%	17.0%

Q13o. not be something I need

	2007 (n=907)	2010 (n=940)
Strongly Agree	22.0%	23.7%
Somewhat Agree	49.0%	46.8%
Somewhat Disagree	25.4%	19.7%
Strongly Disagree	3.6%	9.8%

In general, *home safety technology devices* like those mentioned would:
 Q13p. other: please specify

	2007 (n=907)	2010 (n=940)
Strongly Agree	21.1%	21.0%
Somewhat Agree	37.3%	31.5%
Somewhat Disagree	27.5%	15.8%
Strongly Disagree	14.1%	31.7%

Q14. If I used a *home safety technology device* (like those previously mentioned), it would be important to me to have a customer service representative available by telephone 24 hours a day 7 days a week to provide assistance if I needed help using it.

	2007 (n=907)	2010 (n=940)
Strongly Agree	39.2%	38.3%
Somewhat Agree	39.7%	38.5%
Somewhat Disagree	14.0%	12.7%
Strongly Disagree	7.1%	10.5%

Q15. Overall, how much would you be willing to pay per month to have these types of *home safety technology devices* available to you?

	2007 (n=907)	2010 (n=940)
Nothing		41.3%
Less than \$50	87.1%	NA
\$1 to \$50	NA	54.1%
\$51 - \$100	11.5%	4.5%
More than \$100	1.3%	0.2%

(NEW SECTION)

DO YOU CURRENTLY USE ANY OF THE FOLLOWING HEALTH AND WELLNESS TECHNOLOGY ITEMS?

Q16W2A. A PERSONAL EMERGENCY RESPONSE SYSTEM THAT YOU WEAR AS A PENDANT OR WATCH THAT ALLOWS YOU TO PUSH A BUTTON TO CALL FOR HELP IF NEEDED?

	2010 (n = 940)
Yes	8.9%
No	91.1%

Q16W2B. AN ELECTRONIC PILL BOX THAT REMINDS YOU WHEN TO TAKE OUR MEDICINE AND WHICH MEDICINE TO TAKE?

	2010 (n = 940)
Yes	1.5%
No	98.5%

Q16W2C. AN ELECTRONIC PILL BOX THAT DOES THE SAME THING AS THE ITEM ABOVE AND ALSO SHOWS A HEALTH CARE PROVIDER IF YOU HAVE TAKEN YOUR MEDICINE AS PLANNED?

	2010 (n = 940)
Yes	0.9%
No	99.1%

Q16W2D. A PERSONAL HEALTH SYSTEM THAT LETS PEOPLE SEND MEDICAL INFORMATION ABOUT THEMSELVES (LIKE THEIR BLOOD PRESSURE READINGS, WEIGHT, OR HOW THEIR HEART IS PERFORMING) FROM THEIR HOME TO A HEALTH PROFESSIONAL OVER THEIR TELEPHONE LINES

	2010 (n = 940)
Yes	5.1%
No	94.9%

Q16W2E. A PERSONAL HEALTH SYSTEM THAT DOES THE SAME THING AS THE ITEM ABOVE, BUT HAS A SCREEN AND ALLOWS YOU TO HAVE A VIDEO CONFERENCE WITH YOUR HEALTH CARE PROVIDER?
(REWORDED SINCE 2007)

	2010 (n = 940)
Yes	2.6%
No	97.4%

For the 2010 data, users are included in the base of the heard / would use questions to match the format of the 2007 survey. We would like to know if you have ever heard about a variety of *personal health and wellness items*.

Have you heard or read about the following personal health and wellness items?

Q16a. a personal emergency response system where the user wears as a pendant or watch that allows her/him to call for help if needed

	2007 (n=907)	2010 (n=940)
Yes	91.3%	85.0%
No	8.7%	15.0%

Have you heard or read about the following personal health and wellness items?

Q16b. an electronic pill box that reminds you when to take your medicine and which medicine to take

	2007 (n=907)	2010 (n=940)
Yes	12.9%	24.4%
No	87.1%	75.6%

Q16c. an electronic pill box that does the same thing as the item above and also shows a health care provider if you have taken your medicine as planned

	2007 (n=907)	2010 (n=940)
Yes	4.7%	14.4%
No	95.3%	85.6%

Q16d. a personal health system that lets people send medical information about themselves (like your blood pressure readings, weight, or how their heart is performing) from their home to a health professional over their *telephone lines*

	2007 (n=907)	2010 (n=940)
Yes	48.4%	44.1%
No	51.6%	55.9%

Q16e. a personal health system that does the same thing as the item above, but has a screen and allows you to have a video conference with your health care provider? (reworded since 2007)

	2007 (n=907)	2010 (n=940)
Yes	13.1%	22.8%
No	86.9%	77.2%

If this was available, would you use it?

Q16_1a. a personal emergency response system where the user wears a pendant or watch that allows her/him to push a button to call for help if needed

	2007 (n=907)	2010 (n=940)
Yes	61.4%	55.3%
No	38.6%	44.7%

Q16_1b. an electronic pill box that reminds you when to take your medicine and which medicine to take

	2007 (n=907)	2010 (n=940)
Yes	40.5%	29.5%
No	59.5%	70.5%

If this was available, would you use it?

Q16_1c. an electronic pill box that does the same thing as the item above and also shows a health care provider if you have taken your medicine as planned

	2007 (n=907)	2010 (n=940)
Yes	30.5%	20.3%
No	69.5%	79.7%

Q16_1d. a personal health monitoring system that lets people send medical information about themselves (like their blood pressure readings, weight, or how their heart is performing) from your home to a health professional over their *telephone lines*

	2007 (n=907)	2010 (n=940)
Yes	48.3%	34.4%
No	51.7%	65.6%

Q16_1e. a personal health system that does the same thing as the item above, but has a screen and allows you to have a video conference with your health care provider? (reworded since 2007)

	2007 (n=907)	2010 (n=940)
Yes	36.1%	25.8%
No	63.9%	74.2%

Previously we asked about a variety of *personal health and wellness* technology devices. Please think about this group of devices in general and tell us how much you agree or disagree with the following statements.

In general, *personal health and wellness* devices like those mentioned would:

Q17a. make me feel safer

	2007 (n=907)	2010 (n=940)
Strongly Agree	28.7%	19.8%
Somewhat Agree	51.0%	53.8%
Somewhat Disagree	14.9%	17.4%
Strongly Disagree	5.5%	9.0%

Q17b. save me time

	2007 (n=907)	2010 (n=940)
Strongly Agree	18.1%	11.1%
Somewhat Agree	42.4%	34.5%
Somewhat Disagree	31.8%	41.1%
Strongly Disagree	7.8%	13.2%

Q17c. save me money

	2007 (n=907)	2010 (n=940)
Strongly Agree	11.1%	5.9%
Somewhat Agree	25.1%	23.6%
Somewhat Disagree	48.5%	45.8%
Strongly Disagree	15.2%	24.6%

Q17d. make me more comfortable

	2007 (n=907)	2010 (n=940)
Strongly Agree	22.4%	14.0%
Somewhat Agree	48.7%	49.9%
Somewhat Disagree	22.2%	24.4%
Strongly Disagree	6.7%	11.6%

Q17e. give me more peace of mind

	2007 (n=907)	2010 (n=940)
Strongly Agree	24.4%	18.4%
Somewhat Agree	50.3%	53.1%
Somewhat Disagree	19.9%	18.9%
Strongly Disagree	5.4%	9.6%

In general, *personal health and wellness* devices like those mentioned would:
 Q17f. give my family/friends more peace of mind

	2007 (n=907)	2010 (n=940)
Strongly Agree	30.6%	22.9%
Somewhat Agree	48.3%	53.4%
Somewhat Disagree	16.1%	15.1%
Strongly Disagree	5.0%	8.5%

Q17g. be something I could rely on

	2007 (n=907)	2010 (n=940)
Strongly Agree	23.4%	16.0%
Somewhat Agree	47.8%	52.5%
Somewhat Disagree	23.0%	21.2%
Strongly Disagree	5.9%	10.3%

Q17h. not be available to me

	2007 (n=907)	2010 (n=940)
Strongly Agree	10.4%	12.4%
Somewhat Agree	42.6%	32.4%
Somewhat Disagree	35.3%	38.1%
Strongly Disagree	11.6%	17.0%

Q17i. cost too much to install

	2007 (n=907)	2010 (n=940)
Strongly Agree	25.0%	25.8%
Somewhat Agree	58.5%	54.2%
Somewhat Disagree	13.3%	14.4%
Strongly Disagree	3.1%	5.6%

Q17j. cost too much to maintain

	2007 (n=907)	2010 (n=940)
Strongly Agree	23.7%	24.0%
Somewhat Agree	58.8%	54.3%
Somewhat Disagree	14.2%	15.4%
Strongly Disagree	3.4%	6.4%

Q17k. be hard to learn how to use

	2007 (n=907)	2010 (n=940)
Strongly Agree	12.0%	10.3%
Somewhat Agree	36.5%	31.9%
Somewhat Disagree	42.5%	44.6%
Strongly Disagree	9.0%	13.2%

In general, *personal health and wellness* devices like those mentioned would:

Q17l. invade my privacy too much

	2007 (n=907)	2010 (n=940)
Strongly Agree	14.2%	13.4%
Somewhat Agree	38.4%	39.0%
Somewhat Disagree	36.0%	33.3%
Strongly Disagree	11.4%	14.3%

Q17m. make me look like I need help

	2007 (n=907)	2010 (n=940)
Strongly Agree	13.3%	12.8%
Somewhat Agree	49.6%	49.0%
Somewhat Disagree	28.8%	25.9%
Strongly Disagree	8.3%	12.4%

Q17n. make me lose the ability to do things for myself

	2007 (n=907)	2010 (n=940)
Strongly Agree	13.0%	11.3%
Somewhat Agree	36.4%	35.6%
Somewhat Disagree	39.9%	37.3%
Strongly Disagree	10.6%	15.8%

Q17o. not be something I need

	2007 (n=907)	2010 (n=940)
Strongly Agree	24.0%	27.4%
Somewhat Agree	48.2%	43.7%
Somewhat Disagree	23.4%	20.5%
Strongly Disagree	4.4%	8.5%

Q17p. other: please specify

	2007 (n=907)	2010 (n=940)
Strongly Agree	23.8%	22.2%
Somewhat Agree	36.2%	34.1%
Somewhat Disagree	27.2%	18.4%
Strongly Disagree	12.9%	25.3%

Q18. If I used a *personal health and wellness device* (like those mentioned previously), it would be important to me to have a customer service representative available by telephone 24 hours a day 7 days a week to provide assistance if I needed help using it.

	2007 (n=907)	2010 (n=940)
Strongly Agree	40.4%	39.3%
Somewhat Agree	39.2%	37.8%
Somewhat Disagree	12.9%	11.7%
Strongly Disagree	7.5%	11.1%

Q19. Overall, how much would you be willing to pay per month to have these types of *personal health and wellness devices* available to you?

	2007 (n=907)	2010 (n=940)
Nothing	NA	42.5%
Less than \$50	87.6%	NA
\$1 to \$50	NA	52.5%
\$51 - \$100	11.0%	3.6%
More than \$100	1.4%	1.3%

Q30w2. We have asked you think about a variety of technology including:

- computers with internet connections to stay in touch with other people,
- home safety technology devices, and
- personal health and wellness devices.

Each of these technologies has a cost. If some combination of these technologies could enable you to live independently, how much would you expect to pay for them all together in total per month?

	2010 (n=940)
Nothing	12.0%
\$1 to \$49	22.8%
\$50	23.8%
\$51 to \$100	23.4%
More than \$100	17.9%

Q31w2. Now, please think about your own monthly budget. If some combination of these technologies:

- computer with internet connection to stay in touch with other people,
- home safety technology devices, and
- personal health and wellness devices

could enable you to live independently as you age, how much do you have available to spend in total per month on this budget item?

	2010 (n=940)
Nothing	19.1%
Less than \$50	40.4%
\$50 - \$99	24.8%
\$100 – 199	9.5%
\$200 - \$299	3.4%
\$300 or more	2.8%

Q20. How willing would you be to have a cardiologist (heart doctor) *diagnose* how your heart is working by receiving information that is transmitted electronically to them *from your primary (family) doctor's office*?

	2007 (n=907)	2010 (n=940)
Very willing	43.2%	29.1%
Somewhat willing	39.8%	42.2%
Somewhat unwilling	10.4%	15.7%
Very unwilling	6.7%	12.9%

Q21. How willing would you be to have a cardiologist (heart doctor) *diagnose* how your heart is working by receiving information that is transmitted electronically to them *from your home*?

	2007 (n=907)	2010 (n=940)
Very willing	34.4%	24.7%
Somewhat willing	42.9%	44.0%
Somewhat unwilling	15.3%	17.9%
Very unwilling	7.4%	13.3%

Q22. How willing would you be to have a cardiologist (heart doctor) provide *follow-up care* by *monitoring (watching)* how your heart is working by receiving information that is transmitted electronically to them from *your primary (family) doctor's office*?

	2007 (n=907)	2010 (n=940)
Very willing	42.5%	29.2%
Somewhat willing	42.1%	45.0%
Somewhat unwilling	9.2%	14.1%
Very unwilling	6.2%	11.7%

Q23. How willing would you be to have a cardiologist (heart doctor) provide follow-up care by *monitoring (watching)* how your heart is working by receiving information that is transmitted electronically to them from *your home*?

	2007 (n=907)	2010 (n=940)
Very willing	35.6%	22.9%
Somewhat willing	40.5%	46.8%
Somewhat unwilling	16.4%	17.4%
Very unwilling	7.5%	12.8%

Q24. What type of home do you live in?

	2007 (n=907)	2010 (n=940)
A single-family detached home	74.7%	65.9%
A multi-unit building (includes apartment, either low rise or high rise)	12.4%	14.5%
A mobile home	5.7%	8.9%
A semi-detached home (like a town house, row house, or duplex)	6.0%	8.7%
Other	1.2%	2.0%

Q25. If you needed help caring for yourself, would you prefer to:

	2007 (n=907)	2010 (n=940)
Have help given to me at my current home	87.1%	85.7%
Move to a facility where care is provided	7.9%	7.7%
Move to a relative's home	4.8%	6.5%
Move to a friend's home	0.2%	0.1%

Do you currently have each of the following in your home?

Q26a. cable television service

	2007 (n=907)	2010 (n=940)
Yes	76.6%	77.3%
No	23.4%	22.7%

Q26b. DVD or VCR

	2007 (n=907)	2010 (n=940)
Yes	92.7%	90.6%
No	7.3%	9.4%

Q26c. a cell phone

	2007 (n=907)	2010 (n=940)
Yes	74.0%	79.4%
No	26.0%	20.6%

Q26d. broad-band Internet service

	2007 (n=907)	2010 (n=940)
Yes	37.6%	45.8%
No	62.4%	54.2%

Q26e. dial-up Internet service

	2007 (n=907)	2010 (n=940)
Yes	44.6%	28.1%
No	55.4%	71.9%

Appendix B: Annotated Questionnaire for Caregiver segment

AARP Caregivers Survey (45-75) – 2007/2010 December 2010 - Annotated Questionnaire

2010 Survey

Field period: 11/11/10 – 11/22/10

N assigned interviews: 6,986

N completes: 4,930

N qualified respondents: 1,152

All results include qualified respondents and are weighted. “Refused” responses are not counted towards the bases.

Q1. Are you currently providing unpaid help to a relative or friend 50 years of age or older?

	2007 (n = 1023)	2010 (n = 1152)
Yes, currently providing	69.9%	72.4%
No, but provided in the past 12 months	30.1%	27.6%
No, and did not provide in the past 12 months	0.0%	0.0%

Q2. How many adults [do/did] you provide this help in the past 12 months?

	2007 (n = 1023)	2010 (n = 1152)
1	67.3%	72.6%
2	24.3%	22.9%
3+	8.4%	4.5%

For the rest of these questions, please think about the adult for whom you [provide/provided] help. If you [provide/provided] help to *more than one person*, please focus on the adult for whom you [provide/provided] the most assistance:

Q3. The following list contains types of activities which might be provided to a person, if the person cannot do this by him or herself.

For each, just tell us if you [provide/provided] this kind of help to the person you [provide/provided] the most help.

Q3a. Get in and out of bed

	2007 (n = 1023)	2010 (n = 1152)
[Do/Did not] provide help	70.4%	70.9%
[Provide/Provided] some help	22.5%	21.7%
[Provide/Provided] a lot of help	7.1%	7.5%

For each, just tell us if you [provide/provided] this kind of help to the person you [provide/provided] the most help.

Q3b. Get dressed

	2007 (n = 1023)	2010 (n = 1152)
[Do/Did not] provide help	65.8%	66.9%
[Provide/Provided] some help	26.4%	24.2%
[Provide/Provided] a lot of help	7.8%	9%

Q3c. Get to and from the toilet

	2007 (n = 1023)	2010 (n = 1152)
[Do/Did not] provide help	73.9%	74.6%
[Provide/Provided] some help	19.2%	18.1%
[Provide/Provided] a lot of help	6.9%	7.3%

Q3d. Get in or out of bathtub or shower

	2007 (n = 1023)	2010 (n = 1152)
[Do/Did not] provide help	68.8%	69.3%
[Provide/Provided] some help	20.5%	19%
[Provide/Provided] a lot of help	10.7%	11.8%

Q3e. Deal with incontinence or diapers

	2007 (n = 1023)	2010 (n = 1152)
[Do/Did not] provide help	78.2%	79.2%
[Provide/Provided] some help	12.9%	12.4%
[Provide/Provided] a lot of help	8.9%	8.4%

Q3f. By feeding him or her

	2007 (n = 1023)	2010 (n = 1152)
[Do/Did not] provide help	75.0%	76.8%
[Provide/Provided] some help	19.2%	18.4%
[Provide/Provided] a lot of help	5.8%	4.8%

Q3g. Giving medicines, pills, or injections

	2007 (n = 1023)	2010 (n = 1152)
[Do/Did not] provide help	52.4%	50.4%
[Provide/Provided] some help	31.3%	31.1%
[Provide/Provided] a lot of help	16.3%	18.5%

[Do/Did] you provide the following types of help to the person you help?

Q4a. Manage finances, such as pay bills, or fill out insurance claims

	2007 (n = 1023)	2010 (n = 1152)
[Do/Did not] provide help	30.7%	28.3%
[Provide/Provided] some help	33.5%	39.6%
[Provide/Provided] a lot of help	35.8%	32.1%

Q4b. Grocery shopping

	2007 (n = 1023)	2010 (n = 1152)
[Do/Did not] provide help	19.4%	19.7%
[Provide/Provided] some help	42.9%	40%
[Provide/Provided] a lot of help	37.6%	40.3%

Q4c. Do housework, like dishes, laundry, or straightening up

	2007 (n = 1023)	2010 (n = 1152)
[Do/Did not] provide help	27.2%	27.4%
[Provide/Provided] some help	40.5%	41.2%
[Provide/Provided] a lot of help	32.3%	31.4%

Q4d. Prepare meals

	2007 (n = 1023)	2010 (n = 1152)
[Do/Did not] provide help	36.1%	32.9%
[Provide/Provided] some help	35.6%	37.2%
[Provide/Provided] a lot of help	28.3%	29.9%

Q4e. Provide transportation by driving or helping get the person you help get transportation

	2007 (n = 1023)	2010 (n = 1152)
[Do/Did not] provide help	17.5%	18.6%
[Provide/Provided] some help	38.9%	37.9%
[Provide/Provided] a lot of help	43.5%	43.5%

Q4f. Arrange or supervise services from an agency, such as nurses or aids

	2007 (n = 1023)	2010 (n = 1152)
[Do/Did not] provide help	58.7%	58.7%
[Provide/Provided] some help	21.1%	21.9%
[Provide/Provided] a lot of help	20.3%	19.4%

Respondent must provide at least “some help” on at least one part of Q3a-g or Q4a-f or be terminated.
 Q5. Now, we'd like to ask you some questions about the adult you [provide/provided] help. What [is/was] this person's relationship to you?

	2007 (n = 1023)	2010 (n = 1152)
Spouse or partner	9.9%	11.1%
Mother	36.2%	35.8%
Father	10.7%	11%
Mother-in-law or father-in-law	11.6%	10.1%
Son or daughter	1.0%	2.5%
Brother-in-law or sister-in-law	1.2%	1%
Grandparent	1.8%	0.6%
Grandparent-in-law	0.4%	0.3%
Aunt or uncle	4.2%	3.9%
Other relative	6.9%	6.6%
Friend or neighbor	16.1%	17.1%

Q6. Thinking about all the kinds of help you [provide/provided] this person, about how many hours [do/did] you spend in an average week doing these things?

	2007 (n = 1023)	2010 (n = 1152)
Less than 1 hour	8.5%	9.9%
1 to 8 hours	45.2%	46.4%
9 to 20 hours	24.3%	24%
21 to 39 hours	7.5%	9.1%
40 hours or more	14.6%	10.6%

Q7. Where [does/did] the person you [provide/provided] the most help live?

	2007 (n = 1023)	2010 (n = 1152)
In same household with me	29.3%	31.2%
Less than 20 minutes away	38.4%	40.7%
20 minutes to 1 hour away	18.3%	15.1%
1 to 2 hours away	4.8%	3.7%
More than 2 hours away	9.3%	9.3%

Q7a. Where [does/did] the person you [provide/provided] the most help live?

	2007 (n = 1023)	2010 (n = 1152)
In her/his own home	71.6%	73.2%
In other's home	5.4%	5.5%
An Independent living/retirement community	7.3%	7%
An assisted living facility	6.6%	6.4%
A nursing home	6.6%	4.7%
Other	2.5%	3.3%

Q8. We have been asking about the help you [provide/provided] to the person you assist the most. Do you feel you had a choice in taking on this responsibility?

	2007 (n = 1023)	2010 (n = 1152)
Yes	58.6%	59.3%
No	41.4%	40.7%

Q9. How many prescription medications [does/did] the person you [help/helped] take daily?

	2007 (n = 1023)	2010 (n = 1152)
None	4.9%	6.3%
1 – 3	33.1%	30.3%
4 – 5	26.4%	31.1%
6 or more	35.5%	32.3%

NEW

Q11w2. Do you think of yourself as a caregiver?

	2010 (n = 1152)
Yes	31.6%
No	32.9%
Sometimes	35.5%

Text for respondent to read:

We define caregivers as people who provide help to someone age 50 or older with the types of activities mentioned earlier including getting into or out of bed, getting dressed, getting to and from the toilet, getting in or out of the bathtub or shower, dealing with incontinence or diapers, feeding him or her or giving medicines, pills, or injections OR managing finances like paying bills or filling out insurance claims, grocery shopping, doing housework, preparing meals, transportation, arranging or supervising services from an agency such as nurses or aids.

Q12w2. Do you know other people who are providing or provided similar assistance to a friend or family member age 50 or older?

	2010 (n = 1152)
Yes	72.3%
No	27.7%

Q13w2. Are you in contact with them on a regular basis, or as needed?

	2010 (n = 1152)
Yes	75.4%
No	24.6%

Q14w2. How do you communicate? (select all that apply)

Q14w2a. In person such as visiting at home or in the neighborhood:

	2010 (n = 1152)
Yes	60.3%
No	39.7%

Q14w2. How do you communicate? (select all that apply)

Q14w2b. At group meetings such as at church, synagogue, PTA, or work

	2010 (n = 1152)
Yes	10.1%
No	89.9%

Q14w2c. By telephone or cell phone

	2010 (n = 1152)
Yes	72.7%
No	27.3%

Q14w2d. On the Internet through e-mails, blogs, or tweets

	2010 (n = 1152)
Yes	17.7%
No	82.3%

Q14w2e. By social networking on sites such as Facebook

	2010 (n = 1152)
Yes	4.9%
No	95.1%

Q15w2. What do you usually communicate about? (check all that apply)

Q15w2a. We give each other emotional support by sharing the things we are worried about and encouraging each other

	2010 (n = 1152)
Yes	68.8%
No	31.2%

Q15w2b. We share tips about how to make things easier, for example, how to solve a specific problem

	2010 (n = 1152)
Yes	58.9%
No	41.1%

Q15w2c. We share information about products or services that could help us as caregivers

	2010 (n = 1152)
Yes	38.2%
No	61.8%

Q15w2. What do you usually communicate about? (check all that apply)

Q15w2d. We pray together, or say we will pray for each other and/or the people we help

	2010 (n = 1152)
Yes	37.3%
No	62.7%

Q15w2e. Other

	2010 (n = 1152)
Yes	14.2%
No	85.8%

Q15w2f. None of the above

	2010 (n = 1152)
Yes	7.5%
No	92.5%

Q16w2. What are the three top problems you face as a caregiver that you need help solving?

- a. [\(open text box for respondent to reply\)](#)
- b. [\(open text box for respondent to reply\)](#)
- c. [\(open text box for respondent to reply\)](#)

Q17w2. What would it be worth to you to solve the first problem you mentioned?

[\(open text box for respondent to reply\)](#)

Q18w2. What would it be worth to you to solve the second problem you mentioned?

[\(open text box for respondent to reply\)](#)

Q19w2. What would it be worth to you to solve the third problem you mentioned?

[\(open text box for respondent to reply\)](#)

Q11w2a. Do you currently use a personal computer to:

Q11w2aa. See and hear people living in different places and carry on a conversation with them?

	2010 (n = 1152)
Yes	18.5%
No	81.5%

Q11w2ab. Search for health information on the internet?

	2010 (n = 1152)
Yes	71.2%
No	28.8%

Q11w2a. Do you currently use a personal computer to:

Q11w2ac. Help find or coordinate services for the person you provide care?

	2010 (n = 1152)
Yes	23.6%
No	76.4%

Q11w2ad. Communicate with family and friends by e-mail

	2010 (n = 1152)
Yes	81.4%
No	18.6%

For the 2010 data, users are included in the base of the heard / would use questions to match the format of the 2007 survey.

Q11. Have you heard or read about using a personal computer to:

Q11a. see and hear people living in different places and to carry on a conversation with them

	2007 (n=1023)	2010 (n = 1152)
Yes	64.6%	68%
No	35.4%	32%

Have you heard or read about using a personal computer to:

Q11b. search for health information on the Internet

	2007 (n=1023)	2010 (n = 1152)
Yes	91.6%	88.5%
No	8.4%	11.5%

Have you heard or read about using a personal computer to:

Q11c. help find or coordinate services for the person you provide care

	2007 (n=1023)	2010 (n = 1152)
Yes	55.2%	59.5%
No	44.8%	40.5%

Have you heard or read about using a personal computer to:

NEW

Q11D. COMMUNICATE WITH FAMILY AND FRIENDS BY E-MAIL?

	2010 (n = 1152)
Yes	93.1%
No	6.9%

Q11_1. If this was available to you, would you [use/have used] a personal computer to:

Q11_1a. see and hear people living in different places and to carry on a conversation with them

	2007 (n=1023)	2010 (n = 1152)
Yes	64.1%	59.6%
No	35.9%	40.4%

If this was available to you, would you [use/have used] a personal computer to:
 Q11_1b. search for health information on the Internet

	2007 (n=1023)	2010 (n = 1152)
Yes	88.1%	85.4%
No	11.9%	14.6%

If this was available to you, would you [use/have used] a personal computer to:
 Q11_1c. help find or coordinate services for the person you provide care

	2007 (n=1023)	2010 (n = 1152)
Yes	75.4%	57.3%
No	24.6%	42.7%

If this was available to you, would you [use/have used] a personal computer to:
 NEW

Q11_1D. COMMUNICATE WITH FAMILY AND FRIENDS BY E-MAIL?

	2010 (n = 1152)
Yes	91%
No	9%

Previously we asked about using a *personal computer* to stay in touch with others or get information. Please think about these tasks in general and tell us how much you agree or disagree with the following statements.

Q12. In general, using a personal computer to stay in touch with others or get information would:
 Q12a. make me feel the person I [help/helped] is safer

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	33.3%	18.7%
Somewhat Agree	46.2%	50.6%
Somewhat Disagree	16.3%	20.3%
Strongly Disagree	4.2%	10.3%

In general, using a personal computer to stay in touch with others or get information would:
 Q12b. save me time

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	39.0%	25.2%
Somewhat Agree	40.1%	50%
Somewhat Disagree	17.3%	18.1%
Strongly Disagree	3.5%	6.7%

Q12c. save the person I [help/helped] money

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	29.7%	18.3%
Somewhat Agree	37.4%	35.4%
Somewhat Disagree	25.6%	33.6%
Strongly Disagree	7.4%	12.7%

In general, using a personal computer to stay in touch with others or get information would:
 Q12d. make the person I [help/helped] more comfortable

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	30.7%	15.7%
Somewhat Agree	39.2%	43.4%
Somewhat Disagree	22.3%	28.7%
Strongly Disagree	7.8%	12.2%

Q12e. give me more peace of mind

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	35.3%	22.8%
Somewhat Agree	43.2%	46.8%
Somewhat Disagree	16.3%	21.5%
Strongly Disagree	5.1%	8.9%

Q12f. give the person I [help/helped] more peace of mind

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	30.4%	20.4%
Somewhat Agree	39.9%	38.9%
Somewhat Disagree	22.3%	28.8%
Strongly Disagree	7.4%	11.8%

Q12g. be something I could rely on

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	27.0%	16.4%
Somewhat Agree	48.3%	53.2%
Somewhat Disagree	20.3%	24.3%
Strongly Disagree	4.4%	6.2%

Q12h. not be available to the person I [help/helped]

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	22.1%	19.4%
Somewhat Agree	33.2%	33.6%
Somewhat Disagree	33.1%	32.5%
Strongly Disagree	11.5%	14.6%

Q12i. cost too much to install

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	20.9%	16.2%
Somewhat Agree	39.4%	34.6%
Somewhat Disagree	28.6%	34.9%
Strongly Disagree	11.1%	14.2%

In general, using a personal computer to stay in touch with others or get information would:
 Q12j. cost too much to maintain

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	18.5%	13.8%
Somewhat Agree	39.2%	34.7%
Somewhat Disagree	31.2%	37.7%
Strongly Disagree	11.1%	13.8%

Q12k. be hard to learn how to use

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	19.7%	13.3%
Somewhat Agree	34.0%	32.4%
Somewhat Disagree	30.9%	39.2%
Strongly Disagree	15.4%	15.1%

Q12l. invade the privacy of the person I [help/helped]

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	10.5%	7.7%
Somewhat Agree	31.5%	29.6%
Somewhat Disagree	39.4%	45%
Strongly Disagree	18.6%	17.7%

Q12m. make the person I [help/helped] look like he/she needs assistance

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	9.7%	6.7%
Somewhat Agree	32.6%	32.5%
Somewhat Disagree	44.3%	44.2%
Strongly Disagree	13.5%	16.6%

Q12n. make the person I [help/helped] lose the ability to do things for her or himself

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	5.7%	3.9%
Somewhat Agree	20.7%	19.4%
Somewhat Disagree	50.1%	52.6%
Strongly Disagree	23.5%	24.1%

Q12o. be something the person I [help/helped] doesn't need

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	12.6%	15.3%
Somewhat Agree	32.8%	36.6%
Somewhat Disagree	39.9%	35.5%
Strongly Disagree	14.7%	12.6%

In general, using a personal computer to stay in touch with others or get information would:

Q12p. give me more freedom

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	17.0%	10%
Somewhat Agree	42.7%	39.2%
Somewhat Disagree	31.3%	37.8%
Strongly Disagree	9.1%	13%

Q12q. other: please specify

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	27.0%	19.9%
Somewhat Agree	29.1%	26.6%
Somewhat Disagree	21.9%	31.2%
Strongly Disagree	22.0%	22.3%

Q13. Please tell us how much you agree or disagree with the following statement: If I used a *personal computer* to stay in touch with the person I [help/helped] (as described previously), it would be important to me to have a customer service representative available by telephone 24 hours a day 7 days a week to provide assistance if we needed help.

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	41.4%	26.6%
Somewhat Agree	34.2%	35.6%
Somewhat Disagree	13.4%	23.7%
Strongly Disagree	11.0%	14.1%

Q14. How much would you be willing to pay per month to use a *personal computer* to stay in touch with the person you [help/helped]?

	2007 (n = 1023)	2010 (n = 1152)
Nothing	NA	60.1%
Less than \$50	88.0%	NA%
\$1 - \$50	NA	34.8%
\$51 - \$100	9.5%	3.6%
More than \$100	2.5%	1.6%

Q15. How much difficulty do you think you would have persuading the person you [help/helped] to use a *personal computer* to stay in touch with you?

	2007 (n = 1023)	2010 (n = 1152)
Already use computer to stay in touch	7.5%	10.8%
No difficulty	11.1%	13.2%
Some difficulty	26.4%	22.2%
A great deal of difficulty	55.1%	53.9%

(NEW)

We would like to know about your experience as a caregiver with home safety technology devices. (Intro slightly re-worded from 2007)

Q16w2a. Does the person you assist currently use any of the following home technology devices?

Q16w2aa. sensors placed throughout their home to detect if someone falls and, if so, calls for emergency help:

	2010 (n = 1152)
Yes	13.8%
No	86.2%

Q16w2ab. Small electronic devices that can turn off appliances (such as a stove) when not in use, turn lights on and off as needed, or regulate the temperature?

	2010 (n = 1152)
Yes	7.9%
No	92.1%

Q16w2ac. An electronic system that lets a family member or friend know if they are okay, or if their daily routine changes suggesting they might need help (such as getting out of bed as usual) (reworded since 2007)

	2010 (n = 1152)
Yes	5.9%
No	94.1%

Q16w2ad. An alarm that could tell you when a door or window (in their home) has been opened or closed when not expected?

	2010 (n = 1152)
Yes	16.3%
No	83.7%

Q16w2ae. A device in the kitchen that keep track of where they are in the process of preparing food so that if they are interrupted it can remind them of the steps they already completed

	2010 (n = 1152)
Yes	3.7%
No	96.3%

For the 2010 data, users are included in the base of the heard / would use questions to match the format of the 2007 survey.

Have you heard or read about the following home safety technology devices:

Q16a. sensors placed throughout their home to detect if someone falls and, if so, calls for emergency help

	2007 (n = 1023)	2010 (n = 1152)
Yes	26.7%	58%
No	73.3%	42%

Have you heard or read about the following home safety technology devices:

Q16b. small electronic devices that can turn off appliances (such as stove) when not in use, turn lights on and off as needed, regulate the temperature

	2007 (n = 1023)	2010 (n = 1152)
Yes	36.0%	38.2%
No	64.0%	61.8%

Q16c. an electronic system that lets you know if the person you provide care is okay, or if her/his daily routine changed suggesting she/he might need help (such as not getting out of bed as usual)

	2007 (n = 1023)	2010 (n = 1152)
Yes	19.1%	35.6%
No	80.9%	64.4%

(Intro slightly re-worded from 2007)

Have you heard or read about the following home safety technology devices:

Q16d. an alarm that could tell when a door or window has been opened or closed (in their home) when not expected

	2007 (n = 1023)	2010 (n = 1152)
Yes	67.8%	59.1%
No	32.2%	40.9%

Have you heard or read about the following home safety technology devices:

Q16e. a device in the kitchen that keeps track of where they are in the process of preparing food so that if they are interrupted it can remind her/him of the steps she/he completed

	2007 (n = 1023)	2010 (n = 1152)
Yes	11.0%	18.1%
No	89.0%	81.9%

If this was available, would you [use/have used] it?

Q16_1a. Sensors placed throughout their home to detect if someone falls and, if so, calls for emergency help

	2007 (n = 1023)	2010 (n = 1152)
Yes	61.5%	68.3%
No	38.5%	31.7%

Q16_1b. small electronic devices that can turn off appliances (such as stove) when not in use, turn lights on and off as needed, regulate the temperature

	2007 (n = 1023)	2010 (n = 1152)
Yes	62.9%	56.9%
No	37.1%	43.1%

If this was available, would you [use/have used] it?

Q16_1c. an electronic system that lets you know if the person you provide care is okay, or if her/his daily routine changed suggesting she/he might need help (such as not getting out of bed as usual)

	2007 (n = 1023)	2010 (n = 1152)
Yes	63.0%	59.4%
No	37.0%	40.6%

Q16_1d. an alarm that could tell when a door or window has been opened or closed (in their home) when not expected

	2007 (n = 1023)	2010 (n = 1152)
Yes	63.3%	59.8%
No	36.7%	40.2%

Q16_1e. a device in the kitchen that keeps track of where they are in the process of preparing food so that if they are interrupted it can remind her/him of the steps she/he completed

	2007 (n=1023)	2010 (n = 1152)
Yes	35.9%	42.3%
No	64.1%	57.7%

In the previous question we asked about a variety of *home safety technology devices*. Please think about these devices in general and tell us how much you agree or disagree with the following statements.

In general, *home safety technology devices* like those mentioned would:

Q17a. make me feel the person I [help/helped] is safer

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	42.4%	35.5%
Somewhat Agree	45.2%	49.5%
Somewhat Disagree	10.0%	9.8%
Strongly Disagree	2.3%	5.1%

Q17b. save me time

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	27.7%	19.2%
Somewhat Agree	39.0%	39%
Somewhat Disagree	28.2%	33.1%
Strongly Disagree	5.0%	8.7%

Q17c. save the person I [help/helped] money (introduction slightly reworded from 2007)

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	16.5%	12.8%
Somewhat Agree	24.6%	23%
Somewhat Disagree	43.0%	47.8%
Strongly Disagree	15.8%	16.3%

In general, *home safety technology devices* like those mentioned would:

Q17d. make the person I [help/helped] more comfortable

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	28.7%	21.5%
Somewhat Agree	43.3%	47.5%
Somewhat Disagree	21.8%	23.5%
Strongly Disagree	6.2%	7.5%

Q17e. give me more peace of mind

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	41.2%	33.1%
Somewhat Agree	42.4%	48.4%
Somewhat Disagree	13.0%	13.4%
Strongly Disagree	3.4%	5.1%

Q17f. give the person I [help/helped] more peace of mind

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	31.3%	24.7%
Somewhat Agree	43.8%	46.9%
Somewhat Disagree	18.9%	21.3%
Strongly Disagree	6.1%	7%

Q17g. be something I could rely on

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	22.9%	19.3%
Somewhat Agree	53.3%	55.5%
Somewhat Disagree	20.4%	19%
Strongly Disagree	3.4%	6.2%

Q17h. not be available to the person I [help/helped]

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	13.0%	12.1%
Somewhat Agree	39.5%	41.2%
Somewhat Disagree	38.1%	38%
Strongly Disagree	9.4%	8.7%

Q17i. cost too much to install

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	29.5%	28.3%
Somewhat Agree	48.4%	48.2%
Somewhat Disagree	18.0%	19.1%
Strongly Disagree	4.2%	4.4%

In general, *home safety technology devices* like those mentioned would:

Q17j. cost too much to maintain

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	25.6%	24.6%
Somewhat Agree	48.4%	49.8%
Somewhat Disagree	21.5%	20.5%
Strongly Disagree	4.6%	5.1%

Q17k. be hard to learn how to use

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	14.7%	13.2%
Somewhat Agree	38.1%	38.1%
Somewhat Disagree	37.9%	40%
Strongly Disagree	9.4%	8.6%

Q17l. invade the privacy of the person I [help/helped]

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	11.4%	10.2%
Somewhat Agree	32.3%	33.7%
Somewhat Disagree	41.5%	44%
Strongly Disagree	14.7%	12.1%

Q17m. make the person I [help/helped] look like she/he needs assistance

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	14.3%	12.9%
Somewhat Agree	46.5%	49.1%
Somewhat Disagree	30.3%	30.4%
Strongly Disagree	8.9%	7.6%

Q17n. make the person I [help/helped] lose the ability to do things for her or himself

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	7.9%	7.6%
Somewhat Agree	26.1%	29.3%
Somewhat Disagree	49.4%	48.8%
Strongly Disagree	16.6%	14.3%

Q17o. be something the person I [help/helped] doesn't need

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	13.1%	14.5%
Somewhat Agree	33.1%	35.9%
Somewhat Disagree	41.9%	39%
Strongly Disagree	12.0%	10.7%

In general, *home safety technology devices* like those mentioned would:

Q17p. give me more freedom

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	17.1%	11.6%
Somewhat Agree	40.4%	43.7%
Somewhat Disagree	33.0%	33.2%
Strongly Disagree	9.4%	11.5%

Q17q. other: please specify

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	23.9%	18.1%
Somewhat Agree	32.0%	35.5%
Somewhat Disagree	21.7%	25%
Strongly Disagree	22.3%	21.5%

Q18. If the person I [help/helped] used a *home technology safety device* (like those mentioned previously), it would be important to me to have a customer service representative available by telephone 24 hours a day 7 days a week to provide assistance if we needed help.

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Strongly Agree	49.4%	40.5%
Somewhat Agree	34.2%	37.5%
Somewhat Disagree	12.1%	13.8%
Strongly Disagree	4.3%	8.3%

Q19. Overall, how much would you be willing to pay per month to have these types of *home safety technology devices* available to the person you [help/helped]?

Slightly different wording	2007 (n =1023)	2010 (n = 1152)
Nothing	NA	43.1%
Less than \$50	77.4%	NA
\$1 - \$50	NA	47.6%
\$51 - \$100	19.1%	7.1%
More than \$100	3.5%	2.2%

Q20. How much difficulty do you think you would have persuading the person you [help/helped] to use the kinds of home safety devices described previously?

	2007 (n =1023)	2010 (n = 1152)
No difficulty	16.0%	14%
Some difficulty	41.2%	40.3%
A great deal of difficulty	42.7%	45.7%

NEW

DOES THE PERSON YOU ASSIST CURRENTLY USE ANY OF THE FOLLOWING HEALTH AND WELLNESS TECHNOLOGY DEVICES?

Q21W2A. PERSONAL EMERGENCY RESPONSE SYSTEM WHERE THE USER WEARS A PENDANT OR WATCH THAT ALLOWS HER/HIM TO CALL FOR HELP IF NEEDED.

	2010 (n = 1152)
Yes	19.2%
No	80.8%

Q21W2B. AN ELECTRONIC PILL BOX THAT REMINDS THEM WHEN TO TAKE THEIR MEDICINE AND WHICH MEDICINE TO TAKE.

	2010 (n = 1152)
Yes	3.2%
No	96.8%

Q21W2C. AN ELECTRONIC PILL BOX THAT DOES THE SAME THING AS THE ITEM ABOVE AND ALSO SHOWS A HEALTH CARE PROVIDER IF SHE/HE HAS TAKEN THEIR MEDICINE AS PLANNED

	2010 (n = 1152)
Yes	2.2%
No	97.8%

Q21W2D. A PERSONAL HEALTH MONITORING SYSTEM THAT LETS THEM SEND MEDICAL INFORMATION ABOUT THEMSELVES (LIKE THEIR BLOOD PRESSURE READINGS, WEIGHT, OR HOW THEIR HEART IS PERFORMING) FROM THEIR HOME TO A HEALTH PROFESSIONAL OVER THEIR TELEPHONE LINES

	2010 (n = 1152)
Yes	8.4%
No	91.6%

Q21W2E. A PERSONAL HEALTH MONITORING SYSTEM THAT DOES THE SAME THING AS THE ITEM ABOVE, BUT HAS A SCREEN AND ALLOWS THEM TO HAVE A VIDEO CONFERENCE WITH THEIR HEALTH PROVIDER?

	2010 (n = 1152)
Yes	4.1%
No	95.9%

(Introduction slightly re-worded from 2007)

We would like to know if you have ever heard about a variety of *personal health and wellness technology items*

For the 2010 data, users are included in the base of the heard / would use questions to match the format of the 2007 survey.

Have you heard or read about the following?

Q21a. a personal emergency response system where the user wears a pendant or watch that allows her/him to push a button to call for help if needed

	2007 (n=1023)	2010 (n = 1152)
Yes	93.7%	88%
No	6.3%	12%

Have you heard or read about the following?

Q21b. an electronic pill box that reminds the person you provide care when to take her/his medicine and which medicine to take

	2007 (n=1023)	2010 (n=1152)
Yes	20.7%	24.5%
No	79.3%	75.5%

Q21c. an electronic pill box that does the same thing as the item above and also shows a health care provider if the person you provide care has taken your medicine as planned

	2007 (n=1023)	2010 (n=1152)
Yes	8.2%	14.2%
No	91.8%	85.8%

Q21d. a personal health monitoring system that lets people send medical information about themselves (like their blood pressure readings, weight, or how their heart is performing) from their home to a health professional over their *telephone lines*

	2007 (n=1023)	2010 (n = 1152)
Yes	52.4%	44.5%
No	47.6%	55.5%

Q21e. a personal health system that does the same thing as the item above, but has a screen and allows you to have a video conference with your health care provider (reworded since 2007)

	2007 (n=1023)	2010 (n = 1152)
Yes	16.0%	21.3%
No	84.0%	78.7%

If this was available, would you [use/ have used] it for the person you assist?

Q21_1a. a personal emergency response system where the user wears a pendant or watch that allows her/him to push a button to call for help if needed

	2007 (n=1023)	2010 (n = 1152)
Yes	79.6%	69.2%
No	20.4%	30.8%

Q21_1b. an electronic pill box that reminds the person you provide care when to take her/his medicine and which medicine to take

	2007 (n=1023)	2010 (n = 1152)
Yes	62.3%	49.3%
No	37.7%	50.7%

If this was available, would you [use/ have used] it for the person you assist?

Q21_1c. an electronic pill box that does the same thing as the item above and also shows a health care provider if the person you provide care has taken your medicine as planned

	2007 (n=1023)	2010 (n = 1152)
Yes	49.2%	37.1%
No	50.8%	62.9%

Q21_1d. a personal health system that lets people send medical information about themselves (like their blood pressure readings, weight, or how their heart is performing) from their home to a health professional over their *telephone lines*

	2007 (n=1023)	2010 (n = 1152)
Yes	58.5%	45.4%
No	41.5%	54.6%

Q21_1e. a personal health monitoring system that does the same thing as the item above, but has a screen and allows you to have a video conference with your health care provider

	2007 (n=1023)	2010 (n = 1152)
Yes	44.7%	36.5%
No	55.3%	63.5%

Previously we asked about a variety of *personal health and wellness* technology devices. Please think about this group of devices in general and tell us how much you agree or disagree with the following statements.

In general, these personal health and wellness devices like those mentioned would:

Q22a. make me feel the person I [help/helped] is safer

	2007 (n = 1023)	2010 (n=1152)
Strongly Agree	39.9%	28.6%
Somewhat Agree	48.2%	49.5%
Somewhat Disagree	8.4%	15.6%
Strongly Disagree	3.5%	6.3%

Q22b. save me time

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	27.4%	16.8%
Somewhat Agree	41.3%	44%
Somewhat Disagree	25.1%	29.5%
Strongly Disagree	6.2%	9.7%

Q22c. save the person I [help/helped] money

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	17.3%	11.3%
Somewhat Agree	26.3%	25.9%
Somewhat Disagree	42.0%	47.9%
Strongly Disagree	14.4%	15%

In general, these personal health and wellness devices like those mentioned would:

Q22d. make the person I [help/helped] more comfortable

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	26.7%	16.9%
Somewhat Agree	45.4%	48.4%
Somewhat Disagree	22.3%	25.9%
Strongly Disagree	5.6%	8.9%

Q22e. give me more peace of mind

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	36.2%	27.6%
Somewhat Agree	49.1%	50.4%
Somewhat Disagree	10.3%	14.6%
Strongly Disagree	4.4%	7.4%

Q22f. give the person I [help/helped] more peace of mind

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	27.7%	21.3%
Somewhat Agree	46.7%	44.5%
Somewhat Disagree	19.4%	24.3%
Strongly Disagree	6.2%	10%

Q22g. be something I could rely on

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	26.4%	16.6%
Somewhat Agree	51.1%	58.2%
Somewhat Disagree	17.8%	18.1%
Strongly Disagree	4.7%	7%

Q22h. not be available to the person I [help/helped]

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	11.5%	9.9%
Somewhat Agree	41.5%	42.6%
Somewhat Disagree	36.6%	38.3%
Strongly Disagree	10.4%	9.3%

Q22i. cost too much to install

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	22.9%	23.1%
Somewhat Agree	52.9%	46.8%
Somewhat Disagree	19.1%	23.2%
Strongly Disagree	5.1%	6.9%

In general, these personal health and wellness devices like those mentioned would:

Q22j. cost too much to maintain

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	22.0%	20.3%
Somewhat Agree	51.5%	48.5%
Somewhat Disagree	21.7%	23.6%
Strongly Disagree	4.9%	7.7%

Q22k. be hard to learn how to use

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	14.8%	13.1%
Somewhat Agree	37.9%	36.8%
Somewhat Disagree	36.0%	40%
Strongly Disagree	11.2%	10.1%

Q22l. invade the privacy of the person I [help/helped]

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	10.7%	10.1%
Somewhat Agree	32.9%	34.2%
Somewhat Disagree	40.1%	43.2%
Strongly Disagree	16.3%	12.5%

Q22m. make the person I [help/helped] look like she/he needs assistance

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	13.8%	11.9%
Somewhat Agree	46.2%	50.8%
Somewhat Disagree	29.1%	27.7%
Strongly Disagree	10.9%	9.6%

Q22n. make the person I [help/helped] lose the ability to do things for her or himself

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	8.6%	8.5%
Somewhat Agree	28.3%	31.3%
Somewhat Disagree	47.9%	44.6%
Strongly Disagree	15.2%	15.6%

Q22o. be something the person I [help/helped] doesn't need

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	11.3%	12.8%
Somewhat Agree	31.3%	37.3%
Somewhat Disagree	43.3%	39.9%
Strongly Disagree	14.0%	10%

In general, these personal health and wellness devices like those mentioned would:

Q22p. give me more freedom

	2007 (n = 1023)	2010 (n=1152)
Strongly Agree	18.2%	12%
Somewhat Agree	43.5%	45.5%
Somewhat Disagree	28.8%	31.7%
Strongly Disagree	9.5%	10.8%

Q22q. other: please specify

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	24.2%	15.3%
Somewhat Agree	32.1%	33.9%
Somewhat Disagree	21.2%	29.4%
Strongly Disagree	22.5%	21.4%

Q23. If the person I [help/helped] used a *personal health and wellness device* (like those mentioned previously), it would be important to me to have a customer service representative available by telephone 24 hours a day 7 days a week to provide assistance if we needed help.

	2007 (n = 1023)	2010 (n = 1152)
Strongly Agree	48.6%	38.9%
Somewhat Agree	34.0%	37.1%
Somewhat Disagree	13.0%	15%
Strongly Disagree	4.4%	9.1%

Q24. Overall, how much would you be willing to pay per month to have these types of *personal health and wellness devices* available to the person you help?

	2007 (n = 1023)	2010 (n = 1152)
Nothing	NA	44.9%
Less than \$50	78.4%	NA
\$1 - \$50	NA	46.6%
\$51 - \$100	18.1%	6.6%
More than \$100	3.5%	2%

Q42w2. We have asked you think about a variety of technology including:

- computers with internet connections to stay in touch with other people,
- home safety technology devices, and
- personal health and wellness devices.

Each of these technologies has a cost. If some combination of these technologies could enable you, or the person you assist, to live independently, how much would you expect to pay for them all together in total per month?

	2010 (n=1152)
Nothing	9.2%
\$1 to \$49	18.6%
\$50	14.8%
\$51 to \$100	26.1%
More than \$100	31.2%

Q42aw2. Now, please think about your own monthly budget. If some combination of these technologies:

- computer with internet connection to stay in touch with other people,
- home safety technology devices, and
- personal health and wellness devices

could enable you, or the person you assist, to live independently as you or they age, how much do you have available to spend in total per month on this budget item?

	2010 (n = 1152)
Nothing	31.4%
Less than \$50	38.2%
\$50 - \$99	19.7%
\$100 - \$199	6.6%
\$200 - \$299	1.6%
\$300 or more	2.6%

Q25. How much difficulty do you think you would have persuading the person you [help/helped] to use the kinds of *personal health and wellness devices* previously described?

	2007 (n = 1023)	2010 (n = 1152)
No difficulty	16.8%	14.6%
Some difficulty	43.6%	39.8%
A great deal of difficulty	39.6%	45.6%

Q26. How willing would you be to have a cardiologist (heart doctor) *diagnose* how the heart of the person you [help/helped] [is/was] working by receiving information that is transmitted electronically to them *from the primary (family) doctor's office*?

	2007 (n = 1023)	2010 (n = 1152)
Very willing	31.8%	27%
Somewhat willing	40.4%	38.6%
Somewhat unwilling	14.7%	18.8%
Very unwilling	13.1%	15.5%

Q27. How willing would you be to have a cardiologist (heart doctor) *diagnose* how the heart of the person you [help/helped] [is/was] working by receiving information that is transmitted electronically to them *from their home*?

	2007 (n = 1023)	2010 (n = 1152)
Very willing	29.5%	24.7%
Somewhat willing	40.4%	41.3%
Somewhat unwilling	18.4%	18.8%
Very unwilling	11.7%	15.3%

28. How willing would you be to have a cardiologist (heart doctor) provide *follow-up care* by *monitoring (watching)* how the heart of the person you [help/helped] [is/was] working by receiving information that is transmitted electronically to them from *the primary (family) doctor's office*?

	2007 (n = 1023)	2010 (n = 1152)
Very willing	35.1%	26.7%
Somewhat willing	42.4%	43.6%
Somewhat unwilling	13.5%	15.7%
Very unwilling	9.1%	14.1%

Q29. How willing would you be to have a cardiologist (heart doctor) provide follow-up care by *monitoring (watching)* how the heart of the person you [help/helped] [is/was] working by receiving information that is transmitted electronically to them from *their home*?

	2007 (n = 1023)	2010 (n = 1152)
Very willing	31.3%	26%
Somewhat willing	42.4%	41.8%
Somewhat unwilling	16.6%	17.5%
Very unwilling	9.8%	14.7%

NEW

Know we would like to ask you some questions about you.

Q48w2. Do you, or did you, work full-time or part-time while you provide(d) help to someone age 50+?

	2010 (n = 1152)
Yes	59.9%
No	40.1%

NEW

If the respondent is working full or part-time, ask:

Q49w2. Does the person you report to at work know you are a caregiver, or providing help to someone age 50 or older?

	2010 (n = 1152)
Yes	60.3%
No	39.7%

Q30. What type of home do you live in?

	2007 (n = 1023)	2010 (n=1152)
A single-family detached home	72.3%	67.6%
A multi-unit building (includes apartment, either low rise or high rise)	12.7%	16.1%
A mobile home	7.2%	8.5%
A semi-detached home (like a town house, row house, or duplex)	6.2%	6%
Other	1.4%	1.8%

Do you currently have each of the following in your home?

Q31a. cable television service

	2007 (n = 1023)	2010 (n=1152)
Yes	72.8%	74.7%
No	27.2%	25.3%

Q31b. DVD or VCR

	2007 (n = 1023)	2010 (n=1152)
Yes	96.1%	93%
No	3.9%	7%

Q31c. a cell phone

	2007 (n = 1023)	2010 (n=1152)
Yes	83.7%	86.8%
No	16.3%	13.2%

Q31e. broad-band Internet service

	2007 (n = 1023)	2010 (n=1152)
Yes	54.6%	64.8%
No	45.4%	35.2%

Q31f. dial-up Internet service

	2007 (n = 1023)	2010 (n=1152)
Yes	41.6%	24.5%
No	58.4%	75.5%

Appendix C: Market Estimates for 65+

Market Estimates for Healthy @ Home 2.0 Among the 65+ Who Are Willing to Pay \$1-50 per Month To Use a Personal Computer to Stay in Touch with Other People

Using different assumptions, which take into account those who are not willing to pay to use the technology, and using the mid-point of the price range (\$25) we get the following results.

- In 2010 the U.S. Census estimates there were 40,228,712 people age 65+ in the U.S.
- Based on our sample of people 65+ in the Healthy @ Home 2.0 study, almost half (49%, n=453) of the 65+ say they are willing to pay \$1-50 per month to use a personal computer to stay in touch with other people.
- 49% of 40,228,712 (estimated number of 65+) = 19,712,068 (estimated number of 65+ willing to pay \$1-50 per month for a personal computer to stay in touch with other people).

Among people 65+ who would pay \$1-50 per month to use a personal computer to stay in touch with other people, a varying proportion (number) would use a personal computer for specific tasks (see Figure 1).

Figure 1: Market Estimates per Month for Personal Computer for Specific Tasks

Use of Device	Estimated Proportion who Would Use	Estimated number who Would Use (% of 19,712,068)	Market Estimate per Month Based on \$25
See and hear people living in different places and carry on a conversation with them	66% (n=299)	13,009,964	\$325,249,100
Play games, like a card game, with people living in different places just for fun	41% (n=187)	8,081,948	\$202,048,700
Search for health information on the Internet	81% (n=368)	15,966,775	\$399,169,375
Communicate with family and friends by e-mail	92% (n=417)	18,135,103	\$453,377,575

**Market Estimates for Healthy @ Home 2.0
Among the 65+ Who Are Willing to Pay \$1-50 per Month
To Use Home Safety Technology Devices**

Using different assumptions, which take into account those who are not willing to pay to use the technology, and using the mid-point of the price range (\$25) we get the following results.

- In 2010 the U.S. Census estimates there were 40,228,712 people age 65+ in the U.S.
- Based on our sample of people 65+ in the Healthy @ Home 2.0 study, more than half (54%, n=505) of the 65+ say they are willing to pay \$1-50 per month to use home safety technology devices.
- 54% of 40,228,712 (estimated number of 65+) = 21,723,504 (estimated number of 65+ willing to pay \$1-50 per month for home safety technology devices).

Among people 65+ who would pay \$1-50 per month to use home safety technology devices, a varying proportion (number) would use different types of technology (see Figure 2).

Figure 2: Market Estimates per Month by Home Safety Technology Device

Type of Device	Estimated Proportion who Would Use	Estimated number who Would Use (% of 21,723,504)	Market Estimate per Month Based on \$25
Sensors placed throughout the home to detect if someone falls	65% (n=330)	14,120,277	\$353,006,925
Small electronic devices that can turn off appliances (such as the stove) when not in use, turn lights on and off as needed, regulate the temperature	60% (n=304)	13,034,102	\$325,852,550
An electronic system that lets a family member or friend know if you are okay, or if your daily routine changes suggesting you might need help (such as getting out of bed as usual)	59% (n=297)	12,816,867	\$320,421,675
An alarm that could tell you when a door or window (in your home) has been opened or closed when not expected	69% (n=349)	14,989,218	\$374,730,450
A device in the kitchen that keeps track of where you are in the process of preparing food so that if you are interrupted it can remind you of the steps you already completed	32% (n=163)	6,951,521	\$173,788,025

**Market Estimates for Healthy @ Home 2.0
Among the 65+ Who Are Willing to Pay \$1-50 per Month
To Use Personal Health and Wellness Devices**

Using different assumptions, which take into account those who are not willing to pay to use the technology, and using the mid-point of the price range (\$25) we get the following results.

- In 2010 the U.S. Census estimates there were 40,228,712 people age 65+ in the U.S.
- Based on our sample of people 65+ in Healthy @ Home 2.0, half (51%, n=483) say they would pay \$1-50 per month to use a personal health and wellness device.
- 51% of 40,228,712 (estimated number of people 65+ in U.S.) = 20,516,643 (estimated number of people 65+ in U.S. who would pay \$1-50 per month for personal health and wellness devices).

Among the 65+ who would pay \$1-50 per month, the proportion who would use any given device varies (see Figure 3).

Figure 3: Market Estimates per Month by Personal Health and Wellness Device

Type of Device	Estimated Proportion who Would Use	Estimated number who Would Use (% of 20,516,643)	Market Estimate per Month Based on \$25
Personal Emergency Response System	70% (n=336)	14,361,650	\$359,041,250
An electronic pill box that reminds you when to take your medicine and which medicine to take	38% (n=182)	7,796,324	\$194,908,100
An electronic pill box that does the same thing as the item above and also shows a health care provider if you have taken your medicine as planned	27% (n=129)	5,539,493	\$138,487,325
A personal health system that lets people send medical information about themselves (like their blood pressure readings, weight, or how their heart is performing) from their home to a health professional over their telephone lines.	45% (n=215)	9,232,489	\$230,812,225
A personal health system that does the same thing as the item above, but has a screen and allows you to have a video conference with your health care provider	37% (n=178)	7,591,158	\$189,778,950



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