Healthy @ Home

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Data collected by Knowledge Networks

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Executive Summary

Older adults age 65+ value their health and independence as well as their family, friends, and freedom. The vast majority say that if they need help caring for themselves, they would prefer to have help given to them in their home. We found that while they have a limited awareness of new technologies that could help them meet their goals, they would be willing to use a wide variety of items if they were available to maintain social contact, gather information, be safe at home, and promote their personal health and wellness.

For example, at least half of the 65+ are aware of a variety of ways a *personal computer* can be used and express a willingness to use a personal computer to gather information and maintain social connectedness. They see many emotional and physical benefits associated with using a personal computer and a few barriers. Cost to install and maintain are a concern, and almost six in ten say this may not be something they need.

Older adults' awareness of *home safety devices* varies depending on the item. However willingness to use these devices exceeds awareness in every case.² These adults see many benefits associated with these devices such as physical safety and emotional peace of mind. However, four out of five express concern about the costs to install and maintain them. Seven in ten say these may not be something they need.

Older adults' awareness of *personal health and wellness devices* varies depending on the item with personal emergency response systems being well known and electronic pill boxes with provider oversight being least well known. Cost concerns rise to the top of the 65+ perceptions of these devices. Four in five express concern about the cost to install and maintain them. Nonetheless, older adults say they perceive safety, peace of mind and comfort as benefits. Seven in ten say these items may not be something they need.³

These adults report a surprising amount of support for telepharmacy. More than nine in ten wish their doctor could perform typical telepharmacy tasks such as checking whether their insurance covers a specific medication before writing a prescription, checking their medication history, and sending prescriptions electronically to the pharmacy to be filled for pick-up. Telepharmacy can potentially reduce medication errors, detect drug interactions, and reduce drug associated costs.

Similarly, there appears to be strong support for telemedicine. Three-fourths of the 65+ say they are willing to have a cardiologist diagnose or monitor a heart condition by receiving information that is transmitted electronically to them from their primary care doctor's office or their home. This could potentially reduce emergency room or doctor

¹ People age 65-74 are more likely to use a personal computer for three tasks than those who are between 75-84 (see and hear people in different places 61% vs. 50%, play games 46% vs. 35%, and search for health information 89% vs. 80%).

² People age 65-74 (71%) are more likely to use a home alarm system than those 75084 (60%). There is no age difference regarding the use of other home safety items.

³People age 75-84 (66%) are more likely to use a personal emergency response system than those age 65-74 (54%). People age 65-74 (44%) are more likely to use an electronic pillbox than those 75084 (36%).

visits by catching early warning signs and preventing the need for emergency or acute health care services.

<u>Caregivers</u>' play an important role in helping older adults deal with their long term care needs. Generally, caregivers' awareness of new technology that could help them meet their own needs as well as the needs of the people they care for varies widely. Yet like those 65+, caregivers say they too would be willing to use a variety of these new items if they were available. However, more than eight in ten caregivers also say they think they will have *some*, *or a great deal of difficulty* persuading the people they help to use these items (approximately 40% in each category).

Fifty percent or more of caregivers are aware of a variety of ways a *personal computer* can be used to help meet their needs. Their willingness to use a personal computer to find and coordinate services exceeds their awareness. Caregivers understand personal computers can help them meet some of their most important needs such as saving time, keeping the person they care for safe and the emotional reassurance of peace of mind. They are less likely than the 65+ to question whether they need this item (44% vs. 58%). However, six in ten are concerned about the costs to install and maintain this equipment. In addition, eight in ten perceive at least some difficulty persuading their care recipient to use it.

Caregivers' awareness of *home safety devices* varies by item. Willingness to use these items generally exceeds their level of awareness. Willingness to use these items is associated with caregiving intensity. We measured caregiving intensity with a level of burden index based on the number of hours of caregiving provided in a typical week and the number of activities of daily living and instrumental activities of daily living the caregiver provides. Level three and four caregivers, who provide a considerable amount of time and effort helping the person they assist, are significantly more likely to use these devices than level one or two caregivers, who provide less time and effort helping the person they assist. Overall, caregivers see physical safety and emotional support as benefits these devices provide, and they are less likely than the 65+ to question whether they need these items (45% vs. 70%). However three-fourths are concerned about cost and four-fifths think they would have at least some difficulty persuading their care recipient to use them.

Caregivers' awareness of *personal health and wellness devices* also varies by item. Willingness to use these items generally exceeds their level of awareness. Level three, four, and five caregivers are generally more willing to use these items than level one and two caregivers. Four out of five caregivers see physical safety benefits as well as emotional peace of mind benefits associated with these items. Caregivers are less likely than the 65+ to question whether they need these items (41% vs. 71%). However, seven in ten are concerned about the costs, and eight in ten say they think they would have at least some difficulty persuading their care recipient to use them.

Approximately eight in ten caregivers agree they wish their care recipients' doctor could perform typical telepharmacy tasks. While this is a substantial amount of support, it is

approximately ten percentage points lower than the 65+. Similarly, two-thirds to three-quarters of caregivers would be willing to have a cardiologist diagnose or monitor their care recipients' heart condition by receiving information that is transmitted electronically to them from their primary care doctor's office or their home. Again, this is a substantial level of support, and it is approximately ten percentage points lower than that reported by the 65+.

<u>Recommendations</u> include the following: Older adults and caregivers could benefit by knowing more about the range of technological devices that are available today (and those that are on the horizon) that could provide greater physical safety, more peace of mind and improved social connectedness. It appears that widespread adoption of such devices will depend on whether providers can convincingly address consumers' concerns about costs and whether older adults think they need these items.

Since people generally lose their ability to be independent gradually, requiring lifestyle adjustments overtime, new consumer guidelines could help older adults and caregivers identify key functional changes which might trigger the need to consider using such devices. For example, healthy older adults with strong social support systems and caregivers in the earliest stages of caregiving are less likely to benefit from these types of technology than older adults who have experienced some physical or cognitive limitations and caregivers in the middle stages of the caregiving experience. Our research also suggests that there comes a time when care recipients need more personal attention than technology currently can offer.

On a personal level, we need more research on why caregivers think they will have difficulty persuading their care recipient to use these devices. We also need to know how these issues can be addressed if the caregiver believes using these items would improve the caregiving situation. We also need to know more about care recipients age 65+ and how they may or may not differ from people age 65+ who do not currently need assistance.

We also need more evidence-based research demonstrating the efficacy of these devices to improve the quality of life of older adults and caregivers. We need to understand more about the cost and reimbursement implications of such technology. And, we need to know more about health providers' willingness or resistance to update medical and social service support systems using these technologies.

Detailed Findings

Introduction

Older adults want to continue living in their home and remain independent for as long as possible – usually for their entire lifetime. ⁴, ⁵, ⁶ Yet over a quarter (26%) of our population age 50 plus say they have a condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting, or carrying. ⁷ We also know the majority of adults age 65 and older (52%) manage two chronic health conditions and the prevalence of chronic conditions increases with age. ⁸, ⁹ This raises the question: How do we, as individuals, as families, and as a society find ways to support an older person's desire to live independently and safely in their homes and communities when they face health challenges which limit their independence?

Today many families rely on informal (unpaid) family caregiving, adult day care programs, and homecare to provide the necessary supports for older family members to remain in their community. Some of these services carry a financial cost, and others may carry a physical or emotional price for the caregivers. In the future, new technologies may improve our ability to support the health and well-being of older people in the community while reducing the costs to individuals, families and society.

Before this can happen, we need to know more about several inter-related issues. For example, are older adults and caregivers who assist older family members aware of new technology that is available that might help them meet their independence goals? Would they be willing to use it if it were available? What do they see as the benefits of, or barriers to using such technology? Is technology perceived as something that will invade their privacy or something that will give them more time and greater peace of mind? Is it seen as being affordable or beyond their means? This study investigates these issues.

⁴ Beyond 50.05 Survey, AARP, April 2005.

⁵ These Four Walls . . . Americans 45+ Talk About Home and Community, AARP, May 2003.

⁶ Fixing to Stay, AARP, 2000.

⁷ Beyond 50.05 Survey, AARP, April 2005.

⁸ Conditions such as cerebrovascular disease, joint disorders, chronic obstructive pulmonary disease, diabetes, hypertension, depression, and asthma are considered chronic.

⁹ Multiple Chronic Conditions A Challenge for the 21st Century. Center on Aging Society, Georgetown University. Number 12, November 2003.

http://ihcrp.georgetown.edu/agingsociety/pubhtml/multiple/multiple.html

¹⁰ Valuing the Invaluable: The Economic Value of Family Caregiving, AARP, June 2006.

¹¹ Caregiving in the U.S., National Alliance on Caregiving and AARP, 2005.

Overview of the Literature

Our first step was to analyze what has been reported on low technology (typically mechanical items such as home modifications and assistive devices) and high technology (typically electronic items such as computers and smart homes) through a comprehensive literature review of work published since 1995. We found that a considerable body of research exists regarding low technology, so we focused this work on high technology.

Older adults generally have a positive attitude toward using new high technology as long as it meets their practical standards for reliability, usefulness, ease of use and affordability. While older adults say they are interested in learning how to use new technologies such as computers, their actual usage is relatively low. Our review of the literature also found the following:

Older Adults

- A variety of telecommunication devices may provide important benefits by
 maintaining contact with family and friends. Such contact can reduce social
 isolation among users and reassure caregivers that older adult family members are
 safe regardless of whether the communication is through the telephone or a
 computer.
- Only one-third of older adults age 65+ have gone online but more than two-thirds of those 50-64 years of age have done so. Those 50-64 years of age are more likely to look for health information online and to trust online sources.
- Older adults appear to have a favorable attitude toward smart home technology. However, only people with significant impairments appear to be open to using technologies that relate to their own impairment. People who do not have significant impairments often say the technology is not for them.¹³
- Patients have positive perceptions of telemedicine technologies over half (57%) say they would like to be able to monitor their medical status at home and send the information via telephone or e-mail to their doctor's office. Few have technology to do this.
- Medication management is an area where technology can be useful to remind patients what they need to take and when they need to take it.
- Caregivers can play an important role in medication management.

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¹²See the complete literature review: Barrett, Linda L., Older Adults' and Family Caregivers' Perceptions and Use of Technology to Maintain Independence: A Literature Review. AARP, April 2008.

We do not know how the perceptions of older adults regarding their "need" for supports such as technology compares with the perceptions of their caregivers or their health care providers.

- Adults generally support the use of technology to communicate information to their health care providers.
- Many people believe their doctors are using electronic health records when they probably are not. ¹⁴
- Although we assume the use of high technology provides benefits to older adults and family caregivers, we found the published (non-proprietary) research documenting these benefits is limited.¹⁵

Caregivers

- Caregivers are receptive to the use of technology to reduce the burden of caregiving.
- Technology is a cost-effective way to deliver interventions to caregivers.

Gaps in Knowledge

These findings are based on studies using research methods that often do not allow us to generalize the results to all older adults. The studies are either based on small samples, qualitative methods, pilot projects or samples that are limited for other reasons. The few large scale studies using representative samples have surveyed people age 18+. These studies do not provide much information on older adults or make the link between the use of technology and the potential for maintaining one's independence in one's own home. Consequently little work in this area focuses specifically on the older adults or caregivers.

We need nationally representative data on older adults' and caregivers' attitudes about the use of technology. We need to identify and understand different subgroups within the older population to better understand their needs and the solution(s) they are willing to adopt. We also need to know what caregivers think about the use of technology and how it may help the people they care for and themselves. Caregivers often provide direct assistance or support that enables older adults to remain independent. Caregivers may be gatekeepers to products and services older adults use to remain in their homes. For all these reasons, caregivers are an important part of the broader perspective.

¹⁴ It is estimated that 75-90 percent of medical records are on paper.

Some information was found in the public domain. For example, Philips reports their Motiva remote patient monitoring system lowers mortality rates more than usual care. They also report 26% fewer hospital days per patient, 34% shorter hospital stays, and a 10% reduction in net costs. However, information on patient and caregivers' attitudes was not found.

See: http://www.medical.philips.com/us/products/telemonitoring/products/telemonitoring/products/telemonitoring/index.asp.

Methods

Two companion surveys were designed for this study, one survey was for adults age 65+ and the other was for caregivers who provided assistance (at least one activity of daily living or instrumental activity of daily living) to at least one older adult. Each survey asked respondents about their:

- awareness
- willingness to use (if it was available)
- perceived benefits or barriers

of three types of technology. These types of technology are:

- personal computer,
- home safety devices, and
- personal health and wellness items.

Since we assumed awareness of new high technology devices was likely to be low, we received permission from the Center for Aging Services Technology (CAST), a program of the American Association of Homes and Services for the Aging, to insert appropriate still photographs from their "Imagine the Future of Aging" DVD to illustrate the types of devices we were asking about.

The data were collected using Knowledge Network's *KnowledgePanel*, an online panel that is representative of the U.S. population. ¹⁶ Data were collected between December 7, 2007 and December 18, 2007 from 907 adults age 65+ and 1023 caregivers between the ages of 45-75 years. The completion rate for the 65+ was 77% with a margin of error of +/- 3.3 percent. The completion rate for caregivers was 71% with a margin of error of 3.1 +/- 3.1 percent.

In addition we asked older adults to rate the importance of a set of factors that contribute to successful aging. We also asked them to tell us how satisfied they are with each of these values in their current life. This enables us to identify areas, from the perspective of older adults, where we have an opportunity to help improve their quality of life.

¹⁶ Knowledge Networks describes their panel as a "national household panel recruited by Random-Digit-Dialing methodology that includes non-Internet households that KN equips with a web-device and it totals approximately 40,000+ individual household members over the age of 12 years."

Profile of Older Adults

The older adults in this study ranged in age from 65 years to 98 years old, the mean age was 74 years. Over half (57%) are women and most are white, non-Hispanic. Most rate their health as excellent or good (13% say *excellent* and 60% say *good*). Yet a substantial proportion report having a physical or cognitive health condition that may influence their independence or safety (see Table 1 on the next page):

- One-third (34%) report having limits on one or more basic physical activities such as walking, climbing stairs, reaching, lifting or carrying,
- Almost two in five (39%) report low vision or hearing impairments
- Fifteen percent report problems learning, remembering, or concentrating.

Despite these potential limitations, almost three-fourths (74%) live in a single-family detached home. Married respondents are significantly more likely to live in a single-family detached home than formerly married respondents (82% vs. 65% widowed and 50% divorced or separated) who are more likely to live in a multi-unit building (6% married vs. 19% widowed and 25% divorced or separated).

The vast majority (87%) say that if they needed help caring for themselves, they would prefer to have help given to me at my current home. This holds true regardless of income, gender, marital status or age. However, nine in ten (90%) of the 65+ who have a great deal of difficulty or cannot perform ADLs or IADLs would prefer to have help given to me at my current home compared to three-fourths (76%) of those who have the least difficulty performing these tasks. A small minority of respondents say that if they needed help caring for themselves, they would prefer to move into a facility where care is provided (8%) or move to a relative's home (5%). 17

Furthermore, almost nine in ten (87%) agree that if I need help to stay in my own home, I would be willing to give up some of my privacy to do that. Those who say they have a condition that substantially limits one or more basic physical activities such as walking, climbing stairs, reaching, lifting or carrying are more likely to agree with this than those who do not have such a condition (92% vs. 85%).

Income also influences older adults' opinions about this issue.

• People who report an annual income of \$50,000 to \$60,000 are significantly more likely to say they *strongly agree* with this statement than those who report other levels of income.¹⁸

¹⁷ Among those who say they would prefer to move into a facility if they needed help caring for themselves, a significantly higher proportion of this group have an annual income of \$75,000 compared to those with an income of less than \$30,000 (15% vs. <6%).

Those with an annual income of \$50,000 to \$60,000 are significantly more likely to say they strongly agree with this statement than those with an annual income lower than \$30,000 annually (56% vs. 28% of

Table l
Proportion of 65+ by Selected Characteristics

Total	Age 65-75	Age 75+
		8
74	69	80
100	53	47
57	48	62
43	52	38
81	81	82
19	19	18
63	76	49
3	3	3
9	10	7
	Ī	41
1	2	*
73	77	70
26	23	30
39	32	47
34	28	41
15	9	22
	100 57 43 81 19 63 3 9 24 1 73 26 39 34	years 74 69 100 53 57 48 43 52 81 81 19 19 63 76 3 3 9 10 24 9 1 2 73 77 26 23 39 32 34 28

Source: Healthy @ Home

N = 907 *<1%

those reporting an annual income of \$20,000 to \$30,000 and 39% of those reporting an annual income of less than \$20,000) or between \$60,000 to \$75,000 (34%). People who report an annual income of \$30,000 to \$50,000 are significantly more likely to say they *strongly agree* with this statement than those who report an annual income \$20,000 to \$30,000 (41% vs. 28%).

More than nine in ten (93%) *agree* technology is a good thing (for example personal computers, the Internet, and personal emergency response systems). People with higher annual incomes (\$60,000+) are more likely to say this than those with lower incomes (<\$30,000). Those with at least a high school education are more likely to agree than those with less than a high school education.

Successful Aging

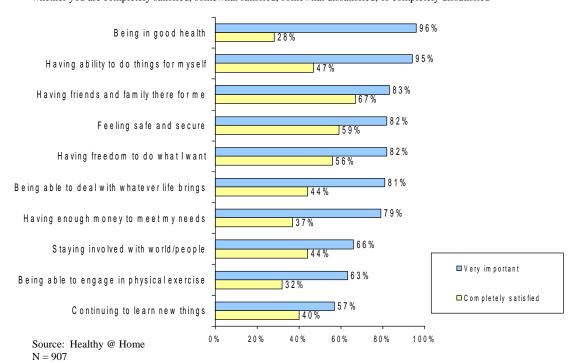
The literature on "successful aging" identifies many factors that are thought to contribute to aging successfully. We selected ten of the most generally agreed upon items and asked respondents to rate how important each item is to them. As Figure 1 shows, *being in good health* and *having the ability to do things for myself* are the two items that are most frequently rated *very important*.

We then asked respondents to indicate how satisfied they currently are with each of these areas of their life. In each case, respondents rated their satisfaction with each item lower than the level of importance they attached to it indicating they are less satisfied with these dimensions of their life than they could be.

Figure 1 Level of Importance and Satisfaction with Successful Aging Values Among those Age 65+

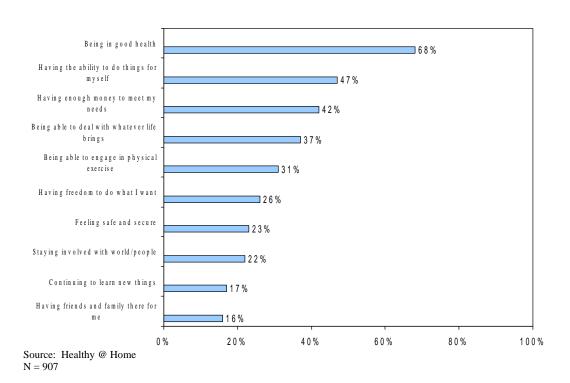
Q Following is a list of things that may or may not be important to you. For each one, please tell us whether it is very important, not very important, or not at all important to you.

Q Now, we are interested in how satisfied you currently are with each of these areas of your life. Please tell us whether you are completely satisfied, somewhat satisfied, somewhat dissatisfied, or completely dissatisfied



Another way to look at these results is to conduct a "gap analysis" by subtracting the level of satisfaction from the level of importance for each item. Figure two shows we have the greatest opportunities to help older adults improve their quality of life in the areas of health, independence, and finances.

Figure 2
Opportunities to Improve Quality of Life
Point Gap between Level of Importance and Satisfaction with Successful Aging
Values Among Those 65+



People 65+ who do not have a condition that substantially limits one or more basic physical activities such a walking, climbing stairs, reaching, lifting or carrying are significantly more likely to be satisfied with each dimension of successful aging than those who do report having such a condition. Similarly, those who say they do not have problems learning, remembering, or concentrating are significantly more likely to be satisfied with each dimension of successful aging than those who do report having such a condition (Table 2). This same pattern is reflected by self-reported health status due to the overlapping nature of these items.

¹⁹ The number of people who report having cognitive limitation is relatively. Due to the small base for this group, we need to interpret the findings about cognitive limitations cautiously.

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Table 2
Proportion of 65+ who are Completely/Somewhat Satisfied with
Successful Aging Items Among Those With / Without
Physical and Cognitive Limitations

Item	Total		sical	Cognitive	
		Limitation		Limitation	
		Yes	No	Yes	No
		A	В	C	D
		n =	n =	n =	n =
		309	593	135*	759
Being in good health	81	60	93A	64	86C
Having the ability to do things for myself	86	69	95A	73	89C
Staying involved with the world and	91	84	96A	82	93C
people around me					
Being able to engage in regular physical	74	49	88A	57	78C
exercise					
Being able to deal with whatever life	89	79	95A	75	92C
brings					
Having enough money to meet my needs	83	71	90A	73	85C
Continuing to learn new things	91	84	95A	79	94C
Having friends and family who are there	94	91	96A	93	95
for me					
Feeling safe and secure	93	89	95A	88	94C
Having the freedom to do what I want	90	82	95A	80	92C

Source: Healthy @ Home

N = 907 *small base

People with physical limitations are more likely to report having a lower income, less than high school education, be widowed or divorced, and be female. People with physical or cognitive limitations are less likely to be 65-74 years old and more likely to be 75+.

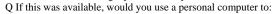
Next we examine the level of awareness, willingness to use, and perceived benefits of, or barriers to using three different types of technology which hold potential for helping older adults achieve their goal of living independently in their own home and achieving a higher quality of life.

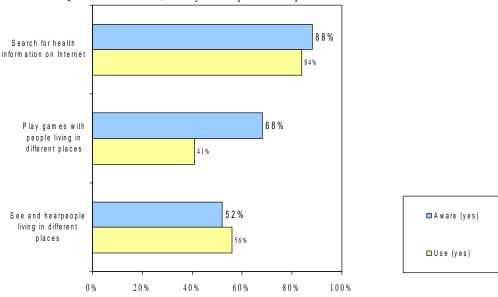
Awareness and Willingness to Use Personal Computers for Interaction/Information

More than half of older adults have heard of using a computer to search for information on the Internet, to play games with people living in different places, and to see and hear people living in different places (Figure 3).

Figure 3
Awareness and Potential Use of Personal Computer to Maintain Contact and Seek Information Among 65+

Q We would like to know if you have heard about using a personal computer in different ways. Have you ever heard or read about using a personal computer to:





Source: Healthy @ Home N = 907

Gender, age, education and income influence level of awareness of using a personal computer for interaction or information. For example:

- Men are more likely to be aware of using a computer to interact with people at a distance (62%) or to play games (72%) than women (44% and 65% respectively).
- College graduates are more likely to be aware of using a computer to interact with people at a distance (62%) or to search for health information on line (92%) than those who have not graduated from high school (40% and 82% respectively).
- Those who earn \$75,000+ annually are more likely to be aware of using a computer for all three activities than those with an annual income of less than \$20,000.

The proportion of the 65+ who express a *willingness to use* a personal computer for two activities is lower than the level of *awareness* (search for health information on line 84% vs. 88% or play games 41% vs. 68%). However, a slightly greater proportion of the 65+ say they are *willing to use* a personal computer to see and hear people living in different places that exceeds their level of awareness (56% vs. 52%).

Age, income and education influence willingness to use a personal computer for these purposes.

- People age 65-74 are more likely to use a personal computer for all three tasks than those who are 75-84 (search for health information on line 89% vs. 80%, play games 46% vs. 35%, search for health information 61% vs. 50%).
- Those with some college or college graduates are more willing to use a computer to search for health information on the Internet (some college = 88%, college graduates = 91%) or interact with people at a distance (some college = 56%, college graduates = 67%) than those with less than a high school education (75% and 44% respectively).
- People who earn less than \$20,000 annually are more likely to say they would use a computer to play games than those who earn between \$20,000 and \$30,000 annually (51% vs. 36%).

Perceived Benefits / Barriers to Using Personal Computers

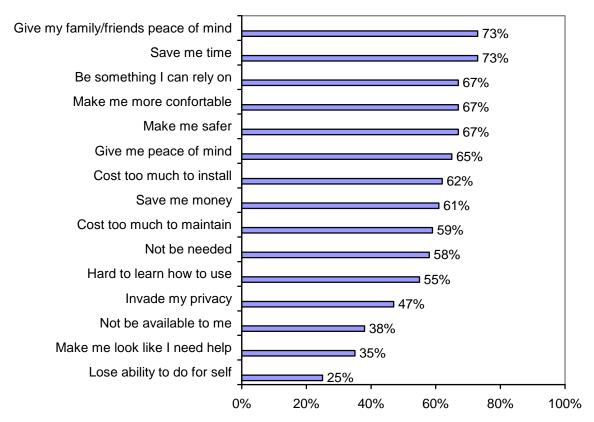
The 65+ agree that using a personal computer for social connectivity and information gathering provides many benefits including: give me more peace of mind (65%) as well as peace of mind for family and friends (73%), save me time (73%), be something I can rely on (67%), and something that makes me more comfortable (67%) and makes me feel safer (67%) (see Figure 4 on the next page).

Nonetheless, approximately six in ten say personal computers will *cost too much to install* (62%), *maintain* (59%), and may *not be something I need* (58%).

Relatively few are concerned about the potentially stigmatizing effects of making them *look like I need help* (35%), or *lose the ability to do things for self* (25%).

Figure 4
Perceptions of the 65+ Regarding
Personal Computers to Stay in Touch / Get Information

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



Source: Healthy @ Home

N = 907

Approximately two-thirds (68%) of respondents also indicated they currently have a computer in their home – this is consistent with a finding reported by Forrester Research. Slightly more than one-third (35%) say they have a broad-band internet service, and four in ten (42%) say they have a dial-up internet service.

Nearly seven in ten (69%) agree that if they used a personal computer to stay in touch with other people, it would be important to them to have a customer service representative available by telephone 24 hours a day, seven days a week, to provide assistance if they needed help. Women were more likely to say this than men (74% vs. 63%), and widows were more likely to say this than people who are married (77% vs. 66%).

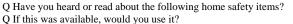
Nine in ten respondents say they would be willing to pay less than \$50.00 per month to use a personal computer for these purposes.

^{20 .}www.forrester.com.

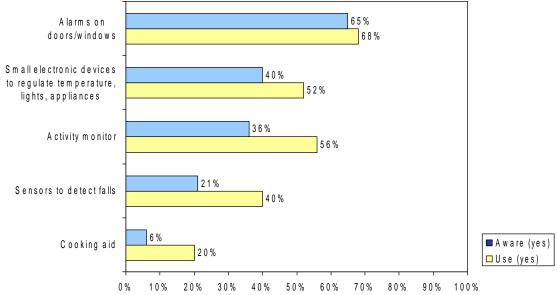
Awareness and Willingness to Use Home Safety Devices

With one exception, less than half of the 65+ say they are aware of a variety of home safety devices (Figure 5). However, regardless of whether they had heard of these devices or not, willingness to use it (if it were available) exceeds awareness for each item.

Figure 5 Awareness and Potential Use of Home Safety Devices Among 65+







Source: Healthy @ Home

N = 907

Marital status, age, gender and income influence willingness to use home safety devices. Widowed people are significantly more likely to say they would use four of the five devices than married people:

- Widowed people are more likely to use the following than those who are married:
 - o Sensors in flooring (53% vs. 33%)
 - Small electronic devices that regulate the environment (63% vs. 47%)
 - Electronic devices that that let someone who lives outside your home know if you are okay, or if your daily routine changes (71% vs. 49%)
 - o Kitchen device that records cooking steps completed (27% vs. 15%)

- People age 65-74 (71%) are more likely to use a home alarm system than those 75-84 (60%). There is no age difference regarding use of other home safety items.
- Women are more likely to use then men
 - o Sensors in flooring (47% vs. 32%)
 - o Electronic devices that that let someone who lives outside your home know if you are okay, or if your daily routine changes (61% vs. 48%)
- People who have an annual income of \$75,000+ are more likely than those who earn \$60,000 to \$74,999 to use:
 - o Sensors in floors (43% vs. 25%)
 - o small electronic devices that regulate the environment (61% vs. 39%)
- Those who earn \$20,000 to \$30,000 are also more likely than those who earn \$60,000 to \$74,999 to use
 - o Electronic devices that let someone who lives outside your home know if you are okay, or if your daily routine changes (64% vs. 40%)

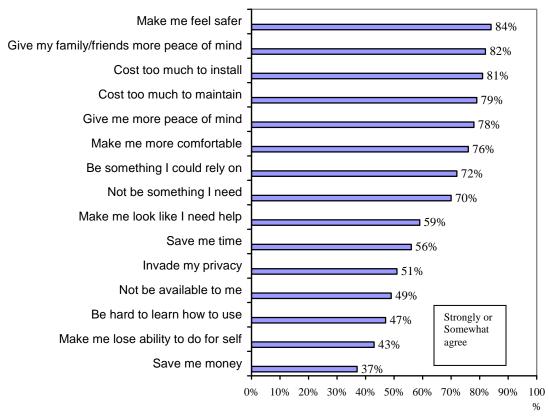
Perceived Benefits / Barriers to Using Home Safety Devices

The 65+ agree that using home safety devices will make them feel safer (84%), give them more personal peace of mind (78%) as well as that of their family, friends (82%). They also agree that home safety items would make them more comfortable (76%) and be something they can rely on (72%) (see Figure 6 on the next page).

Nonetheless, approximately eight in ten are concerned about costs to install (81%) and maintain (79%) these items, and seven in ten say this is not something they need (70%). Almost six in ten agree using these devices may have a stigmatizing effect by making them look like they need help (59%). About half say they are concerned about their privacy (51%).

Figure 6
Perceptions Among 65+ Regarding Home Safety Devices

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



Healthy @ Home N = 907

More than three-fourths (78%) agree that if they used a home safety device, it would be important to them to have a customer service representative available by telephone 24 hours a day, seven days a week, to provide assistance if they needed help.

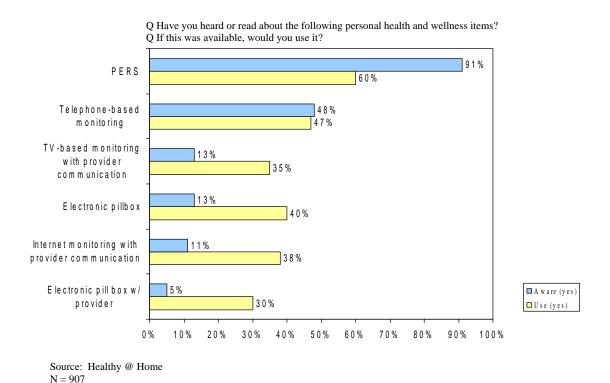
Four-fifths (84%) of respondents say they would be willing to pay less than \$50.00 per month to use home safety devices, and a minority (11%) say they would be willing to pay \$51 to \$100 per month for such items. Those who are willing to pay \$51 to \$100 monthly are significantly more likely to have an annual income over \$60,000 than under \$60,000.

Awareness and Willingness to Use Personal Health and Wellness Devices

We asked respondents about their awareness and willingness to use six different personal health and wellness devices. Awareness of personal health and wellness devices varies widely with most people (91%) being aware of personal emergency response systems (PERS) and few people (5%) reporting awareness of electronic pillboxes that allow health professionals to monitor medication compliance (see Figure 7).

With the exception of two devices (PERS and telephone-based health monitoring) the willingness to use these items exceeds current levels of awareness. However, substantial proportions of people say they would use PERS (60%) and telephone-based monitoring (47%) if they were available.

Figure 7
Awareness and Potential Use of
Health and Wellness Devices by 65+



Age sometimes influences the use of these devices. For example, people age 75-84 (66%) are more likely to say they are willing to use a personal emergency response system than those 65-74 (54%). People 65-74 (44%) are more likely to say they are willing to use an electronic pillbox than those 75-84 (36%).

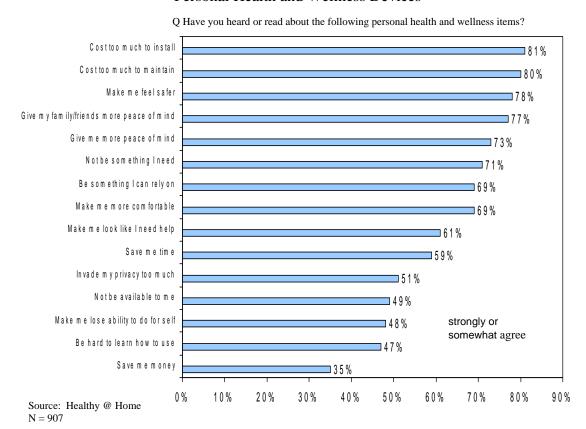
Perceived Benefits / Barriers to Using Personal Health and Wellness Devices

The 65+ agree that the cost of installing and maintaining these devices is a potential barrier (Figure 8). About seven in ten agree they might be something they don't need.

Nonetheless, large majorities agree these devices would *make me feel safer*, *give me more peace of mind* as well as *peace of mind for family and friends*. About two-thirds agree they can rely on these items and that they would *make me more comfortable*.

The potentially stigmatizing effects are rated relatively low (*make me look like I need help, make me lose ability to do for self*) as were the privacy issues and difficulty learning how to use.

Figure 8
Perceptions of 65+ Regarding
Personal Health and Wellness Devices



More than three-fourths (78%) agree that if they used a personal health and wellness device, it would be important to them to have a customer service representative available by telephone 24 hours a day, seven days a week, to provide assistance if they needed help.

More than four in five (84%) say they would be willing to pay less than \$50.00 per month to use personal health and wellness items, and a minority (11%) say they would be

willing to pay \$51 to \$100 per month for such items. Those who are willing to pay \$51 to \$100 monthly are significantly more likely to have an annual income over \$60,000 and to have at least some college education.

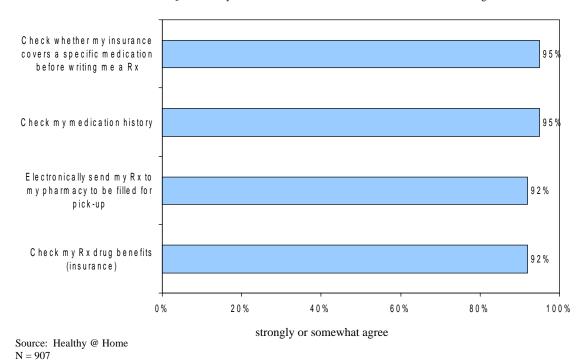
Opinions about Telepharmacy and Telemedicine

Almost all respondents (98%) *agree* that they like to know as much as they can about their health conditions regardless of their demographic characteristics. Furthermore, almost all (96%) *agree* they would like to help their doctor monitor their health. Those with at least a high school education are significantly more likely to *agree* with this than those with less education.

More than nine in ten respondents *agree* they wish their doctor had a device that allows him/her to perform a variety of standard telepharmacy tasks, and a majority of them *strongly agree* (Figure 9):

Figure 9
Opinions About Physician Use of Telepharmacy
Among 65+

Q. "I wish my doctor had a device that allows him/her to do the following:



• More than three in five *strongly agree* with each of these statements (73% wish their doctor had a device that allows him/her to check their medication history, 61% wish their doctor had a device that allows him/her to check their prescription drug benefits (i.e., insurance), 67% wish their doctor had a device that allows him/her to check whether their insurance covers a specific medication before

writing them a prescription, and 67% wish their doctor had a device that allows him/her to electronically send their prescription to their pharmacy to be filled for pick-up.)

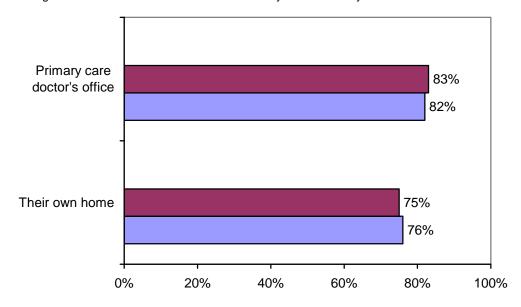
We asked respondents a series of four questions to gain a better understanding of their opinions about using telemedicine from two locations (primary care doctor's office and their own home) regarding two tasks (diagnosing or monitoring a cardiac condition). We chose a heart condition since it is a frequent concern among this population. The majority of respondents were *somewhat* or *very willing* to participate in either task from both locations (Figure 10).

Figure 10
Proportion of 65+ Very or Somewhat Willing to Use Telemedicine by Location and Activity

Q 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?

Q 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 care (family) doctor's office? Q 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?

Q 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?



Source: Healthy @ Home

N = 907

People with more education and higher incomes are generally more likely to support these four options than those with less education or income.

Diagnose cardiac condition via electronic transmission from primary care doctor's office

- People who earn over \$75,000 annually are more likely than those who earn less than \$50,000 annually to say they would be *willing* to have a cardiologist diagnose how their heart is working from their primary care doctor's office and they are more likely to be *very willing* to do this.²¹
- Almost nine in ten (86%) of those with at least some college education are *willing* vs. three-fourths (74%) of those with less than a high school diploma. Half (49%) of those with post-graduate degrees are *very willing* versus thirty-four percent of those with less than a high school diploma.

Diagnose cardiac condition via electronic transmission from patient's home

- People who earn over \$75,000 annually are more likely than those who earn less than \$60,000 annually to say they would be *willing* to have a cardiologist diagnose how their heart is working from their home and they are more likely to be *very willing* to do this. ²²
- College graduates (82%) and high school graduates (78%) are more likely to be willing to do this than those with less than a high school education (65%).

Monitor cardiac condition via electronic transmission from primary care doctor's office

- People who earn over \$75,000 annually are more likely than those who earn less than \$60,000 annually to say they would be *willing* to have a cardiologist provide follow-up care by monitoring how their heart is working from their primary care doctor's and they are more likely to be *very willing* to do this.²³
- No significant difference by education.

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 $^{^{21}}$ Nine in ten (92%) of those earning \$75,000+ are *willing* vs. eight in ten (79%) of those earning <\$30,000. Six in ten (60%) of those earning \$75,000 are *very willing* vs. four in ten (42%) of those earning <\$20,000, one-third (33%) of those earning \$20,000 to \$30,000, and four in ten (40%) of those earning \$30,000 to \$50,000.

Nine in ten (90%) of those who earn \$75,000 say they are *willing* vs. seven in ten (72%) of those who earn <\$20,000, Seven in ten (69%) of those who earn \$20,000 to \$30,000, three-quarters (76%) who earn \$30,000 to \$50,000 and three-quarters (74%) of those who earn \$50,000 to \$60,000. Half (50%) of those who earn \$75,000 say they are *very willing* vs. three in ten (31%) who earn less than \$30,000, a third (32%) of those who earn \$30,000 to \$50,000, and a quarter (27%) of those who earn \$50,000 to \$60,000.

²³ Nine in ten (93%) of those who earn \$75,000 are *willing* vs. eight in ten (81%-82%) of those who earn \$50,000 and three-quarters (78%) of those who earn \$50,000 to \$60,000. Half (55%) of those who earn \$75,000 are *very willing* vs. four in ten (39-40%) of those who earn \$20,000 to \$50,000 and a third (35%) of those who earn \$50,000 to \$60,000.

Monitor cardiac condition via electronic transmission from primary care patient's home

• People who earn over \$75,000 annually are more likely than those who earn less than \$60,000 annually to say they would be *willing* to have a cardiologist provide follow-up care by monitoring how their heart is working from their home and they are more likely to be *very willing* to do this.²⁴

Profile of Caregivers

With the exception of age, the characteristics of the caregivers in this study closely parallel the caregiver characteristics we profiled in *Caregiving in the U.S.* in 2004. This enhances our confidence in this caregiver sample. 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 (59%) are women. 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). The most frequently mentioned ADLs include medication management, bathing, and dressing. The most frequently mentioned IADLs include grocery shopping, housework, and transportation.

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More than eight in ten (85%) of those who earn \$75,000 are *willing* vs. seven in ten (71%) of those who earn \$20,000 to \$30,000, Three-quarters (75%) of those who earn \$30,000 to \$50,000, and two-thirds (68%) of whose who earn \$50,000 to \$60,000. Half (48%) of those who earn \$75,000 are *very willing* vs. one-third (33%) who earn less than \$20,000, and a third (32%) of those who earn \$30,000 to \$50,000.

²⁵ NAC and AARP, Caregiving in the U.S., Washington, D.C., 2004. One exception, however, is age. The earlier study was based on a sample age 18+, this sample is based on caregivers 45-75 years of age. ²⁶ Two-thirds (67%) provide help to one person, a quarter (24%) provide help to two people, and less than one in ten (8%) provide help to three or more people. This is consistent with our earlier research reported in "Caregiving in the U.S." 2004.

Table 3 Proportion of Caregivers who Provide Care Recipient Help With ADLs and IADLs

ADL / IADL	Do not	Provide	Provide a lot
	provide help	some help	of help
Get in and out of bed	68	22	7
Get dressed	64	26	8
Get to and from the toilet	71	19	7
Get in or out of bathtub or shower	67	20	10
Deal with incontinence or diapers	75	12	9
By feeding him or her	73	19	6
Giving medicines, pills, or injections	51	30	16
Manage finances, such as pay bills, or fill	30	33	35
out insurance claims			
Grocery shopping	19	42	37
Do housework, like dishes, laundry, or	27	40	32
straightening up			
Prepare meals	35	35	28
Provide transportation by driving or	17	38	43
helping get the person you help get			
transportation			
Arrange or supervise services from an	57	20	20
agency, such as nurses or aids			

Source: Healthy @ Home N = 1023

More caregivers say they provide help to their mother (36%) than to any other relative (12% mother-in-law or father-in-law, 11% father, 10% spouse or partner, 4% aunt or uncle, 2% grandparent, 1% son or daughter, and 1% brother-in-law or sister-in-law). The second most frequently identified type of care recipient was a friend or neighbor (26%).

Most caregivers (45%) say they provided between *one to eight hours of care* in an average week, but one-quarter (24%) say they provide *nine to twenty hours of care* in an average week. Fewer say they provide *less than one hour of care* (9%), 21-39 hours (8%), or 40+ hours (15%).

The greatest proportion of caregivers *lives within 20 minutes* of the person they provide care (38%). Over a quarter of the caregivers in this study (29%) *live in the same household* with the person they provide care. Less than one in five live *20 minutes to one hour away* (18%).²⁷ Few live farther away (5% 1-2 hours, 9% 2+ hours).

Most care recipients (72%) live in their own home.²⁸

In order to understand the different types of experience that 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 spent providing assistance to a care recipient in typical week, and the number/types of caregiving activities they performed. Using this index we divided our caregivers into five 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.²⁹

Like our previous work, the majority of caregivers in this study (59%) say they feel they had a choice about whether they took on these caregiving responsibilities. However, feeling like one has a choice about taking on this role is related to caregiver level of burden. Two-thirds (69%) of level one caregivers say they feel they had a choice in taking on this responsibility. However, fewer caregivers with a higher level of burden say they had a choice (52% among levels two caregivers, 43% among level three caregivers and 46% among level four caregivers). This suggests that when a care recipient needs increasing levels of assistance, caregivers feel compelled to help them.

We will be looking at the impact of caregiver's self-reported level of burden on their awareness and willingness to use various technologies.

Awareness and Willingness to Use Personal Computers for Interaction/Information

Awareness of using personal computers to search for information about health or to coordinate services on-line varies from a low of 55 percent to a high of 91 percent.

²⁸ Few live in another's home (5%), an independent living retirement community (7%), an assisted living facility (7%), or a nursing home (7%).

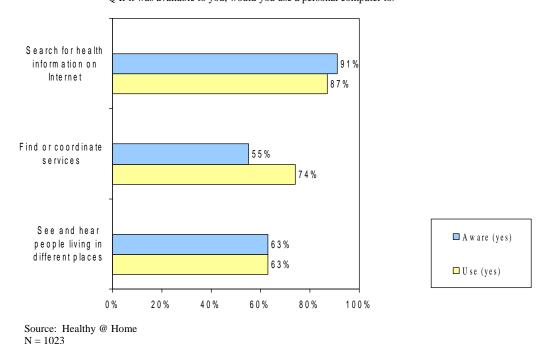
²⁷ The majority (72%) of care recipients lived in their own home.

²⁹ The level of burden index was adopted from the NAC and AARP report Caregiving in the U.S., Washington, DC, 2004.

Willingness to use a personal computer to coordinate services (if it was available) exceeds awareness. There is no difference in the level of awareness and willingness to use a personal computer to maintain social contacts (Figure 11).

Figure 11
Awareness and Potential Use of Personal Computer to Maintain Contact and Seek
Information Among Caregivers

Q Have you heard or read about using a personal computer to: Q If it was available to you, would you use a personal computer to:



Perceived Benefits / Barriers to Using Personal Computers

Caregivers agree that using personal computers to meet social and information needs can provide many benefits for themselves and the people they help. Time is a major factor for caregivers. It is one of their most frequently reported needs. ³⁰ Consequently using a computer to *save me time* is a major benefit for them along with giving them more quality time (*peace of mind*), being *something I can rely on* and giving them *more freedom*. They also see several benefits for the person they help such as giving them *more peace of mind* and *save them money* (Figure 13).

They do not perceive the use of a personal computer as stigmatizing the care recipient by making them look *like they need assistance* or making them *lose the ability to do things*. Relatively few are concerned about the potential for invading the privacy of the person they help. Relatively few see personal computers as something the person they help doesn't need.

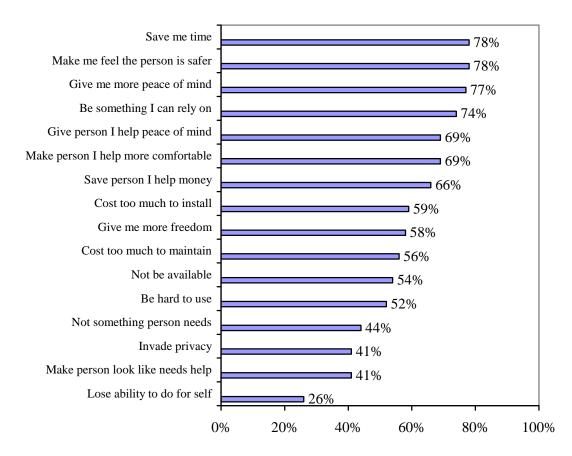
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 $^{^{\}rm 30}$ NAC and AARP, Caregiving in the U.S., Washington, DC, 2004.

On the other hand, about six in ten caregivers are concerned it might *cost too much to install* a personal computer and slightly fewer are concerned they might *cost too much to maintain* the system.

Figure 13
Caregivers Perceptions Regarding Personal Computers to
Stay in Touch / Get Information

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



Source: Healthy @ Home

N = 1023

Despite the potential benefits of using a personal computer, nine in ten say they think they would have *some difficulty* (26%) or *a great deal of difficulty* (54%) persuading the person they help to use a personal computer to stay in touch. Less than one in ten (7%) *currently use* a computer to stay in touch and about one in ten (11%) perceive *no difficulty* persuading the person they help to use a personal computer to maintain contact.

Caregivers who say they would have *a great deal of difficulty* are more likely to be level five caregivers (70% vs. 53% level one, 51% level two, and 47% level three), those who say they had no choice to become a caregiver, caregivers with a lower income (\$20,000-\$30,000 annually), and those whose care recipient takes 4+ medications daily.

Three-quarters (75%) say that if they used a personal computer to stay in touch with the person they help, it would be important to them to have a customer service representative available by telephone 24 hours a day, 7 days a week to provide assistance if they needed help. Female caregivers are more likely to want this service than male caregivers (77% vs. 70%).³¹

The greatest proportion overall (85%) say they would be willing to pay less than \$50 per month to use a personal computer to stay in touch with the person they help. Level four caregivers are more likely to say they would pay \$51 - \$100 per month (16% compared to 4% of level one caregiver's and 7% of level 3 caregivers).

Caregivers who live between twenty-minutes and an hour (91%) and twenty minutes (89%) away from their care recipient are more likely to want to pay less than \$50 than those who live in the same household (79%) with the care recipient or those who live 1-2+ hours away (78%).

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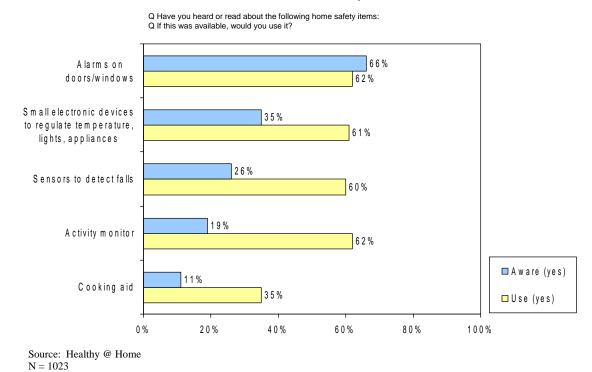
³¹ This is especially true for level three caregivers (compared to level one caregivers 81% vs. 71% respectively) and those with the highest and lowest income levels compared to those in the middle income levels (78% of those earning < \$20,000, 82% of those earning between \$20,000 - \$30,000, 80% of those earning \$75,000+ compared to those earning between \$50,000-\$75,000, 63-64%).

Awareness and Willingness to Use Home Safety Devices

We asked caregivers if they were aware of five different home safety devices. Two-thirds (66%) say they are aware of home alarms that alert residents if a door or window is unexpectedly opened. Six in ten would be willing to use such an alarm if it was available (Figure 13).

With the exception of home alarms, relatively few (approximately one-third or less) say they have heard or read about the different home safety devices. Yet, in each case, caregivers' willingness to use these devices (if they were available) exceeded their awareness of the devices. Devices that regulate the home environment, sensors that can detect falls, and activity monitors that can alert the caregiver if there is a change in the care recipients normal activities appear to be of interest to about six in ten caregivers (Figure 13). This suggests caregivers want to be informed of the care recipient's status so they can respond when help is needed and be reassured when the care recipient is safe.

Figure 13
Caregiver Awareness and
Potential Use of Home Safety Devices



Level three and four caregivers are more willing to use home safety devices than level one, two, or five caregivers (Table 4). This suggests that there is a time early in a caregiver's career when these devices are not needed, a time mid-career when these devices are perceived as useful, and a time when the caregiver thinks the care recipient needs more assistance than these devices can provide.

Table 4
Proportion of Caregivers' Willing to Use Home Safety Devices By Level of Burden

Item	Total	Level 1	Level 2	Level 3	Level 4	Level 5*
	(A)	(B)	(C)	(D)	(E)	(F)
Sensors in floor to detect	60	49	55	69BC	70BC	60
falls						
Small devices to	61	54	55	68B	72BCF	55
regulate environment						
Device than lets	62	57	51	67C	72BC	58
caregiver know if						
recipient's routine						
changes						
Alarm that tells if	62	51	51	65BC	78BC	68
door/window has						
opened/closed						
unexpectedly						
Kitchen device that	35	26	26	41BC	46BC	35
records and reports steps						
taken while cooking as a						
reminder to cook						

Source: Healthy @ Home

N = 1023 *small base

Capital letters in a table cell indicate that cell is statistically different from the cell the letter is in.

It is interesting to note that even though the general pattern of awareness and willingness to use is similar between the 65+ and caregivers, caregivers indicate a greater willingness to use devices that 1) regulate the environment and that 2) detect falls than the 65+ sample.

Perceived Benefits / Barriers to Using Home Safety Devices

A substantial majority of caregivers say that, in general, home safety devices would *make* them feel the person they help is safer (86%) and give them more peace of mind (82%) see Figure 15. Both caregivers and the 65+ agree on these first two items. Furthermore, about seven in ten caregivers say these devices would be something they could rely on (74%), give the person they help greater peace of mind (73%), and make the person I help more comfortable (70%). Nonetheless, approximately three-fourths think the devices cost too much to install (75%), or cost too much to maintain (72%).

In other studies caregivers indicate they want more time for themselves, and it appears they think these devices would provide them more time (65%) and more freedom (56%).³²

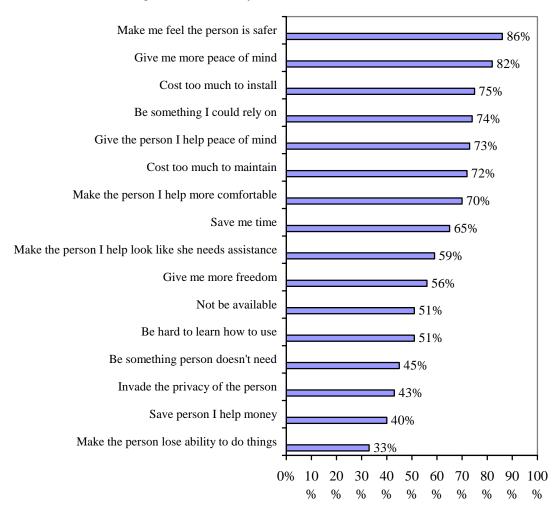
 $^{\rm 32}$ NAC and AARP, Caregiving in the U.S., Washington, D.C., 2004.

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Relatively few caregivers think these devices would lead to potentially negative or stigmatizing outcomes such as make the person they help *lose the ability to do things* themselves, *invade the privacy of the person I help*, or be something they don't need.

Figure 15
Caregivers Perceptions Regarding Home Safety Devices

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



Female caregivers are significantly more concerned about cost (to install 78% vs. 70%, to maintain 77% vs. 64%) than male caregivers. Female caregivers are also more concerned about availability (56% vs. 44%).

Level of caregiver burden is significantly related to eight items (Table 5).

Table 5
Proportion of Caregivers Who Agree or Strongly Agree with Benefits / Barriers
By Level of Burden

Item	Total	Level	Level	Level	Level	Level
		1	2	3	4	5*
	A	В	C	D	Е	F
Make me feel person is safer	86	84	80	90C	91BCF	80
Save me time	65	59	60	66	74BC	71
Safe the person I help money	40	36	35	45	45	39
Make the person I help more	70	65	61	73	80BC	72
comfortable						
Give me more peace of mind	82	79	76	87C	86C	81
Give the person I help more peace	73	72	66	73	79C	73
of mind						
Be something I can rely on	74	65	70	82BC	79B	77
Not be available to the person I	51	49	48	56	48	57
help						
Cost too much to install	75	76	76	71	76	77
Cost too much to maintain	72	75	73	69	72	68
Be hard to learn how to use	51	53	57D	43	54	48
Invade the privacy of the person I	43	45	41	45	41	38
help						
Make the person I help look like	59	64	58	61	55	58
he/she needs assistance						
Make the person I help lose the	33	36	32	35	31	28
ability to do things						
Be something the person doesn't	45	51E	44	43	39	45
need						
Give me more freedom	56	45	48	60B	69BC	60B

Source: Healthy @ Home

N = 1023 *small base

Capital letters indicate number in cell is significantly different from number in lettered cell.

Specific caregiver tasks, like medication management, are linked with specific benefits:

- Caregivers who say the person they help takes six or more prescription medications are more likely to say they can rely on these devices than those who say the person they provide care takes no, or few medications (79% vs. 63-74%).
- Caregivers who say the person they help takes six or more prescription medications are more likely than those who take fewer medications to say the home safety devices may not be available to the person they help. This may be related to income since lower income caregivers indicate the same concern.

More than eight in ten caregivers say they would have *some difficulty* (40%) or *a great deal of difficulty* (42%) persuading their care recipient to use these devices. Only a minority of caregivers say they perceive *no difficulty* (16%) persuading the person they help to use such devices. Caregivers who say they did not have a choice in taking on this role (47%) are more likely to say they would have *a lot of difficulty persuading* the person they help to use home safety devices than those who feel they had a choice in taking on this role (38%).

Most (82%) caregivers agree that if the person they help used a home safety device like those mentioned, it would be important to them to have a customer service representative available by telephone 24 hours a day, seven days a week to provide assistance if they needed help. Caregivers with annual incomes under \$20,000 are more likely to say this than those who earn \$50,000-\$60,000 per year (86% vs. 74%).

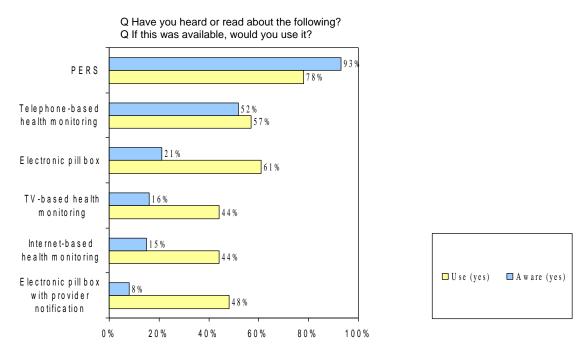
Three-quarters (76%) of caregivers say they are willing to pay less than \$50 per month to have these types of devices available to the person they help – a greater proportion of those who live near the person they help agree (78-80%). Caregivers who live further away from the person they help are more likely to pay more per month (\$51-\$100 - 38% of those living 1-2 hours away would pay, and 30% of those living 2+ hours away).

Awareness and Willingness to Use Personal Health and Wellness Devices

We asked caregivers how aware they were of six different personal health and wellness devices. Awareness of these devices varies, with the highest level being awareness of personal emergency response systems (PERS). The level of awareness of PERS exceeds willingness to use the device if it were available (Figure 15).

For each of the remaining five devices, willingness to use the device if it were available exceeds the level of awareness, suggesting that caregivers may benefit by having more information about these items.

Figure 15
Caregivers' Awareness/Use of Personal Health and Wellness Items



Source: Healthy @ Home N = 1023

Caregivers' proximity to their care recipient also influences willingness to use personal emergency response systems. Caregivers who live within 20 minutes (83%) or 1-2 hours (87%) of their care recipient are more likely to say they are willing to use personal emergency response systems than those who live with the care recipient (73%) or are 2+ hours away (68%).

Caregivers who have heavier levels of burden report a greater willingness to use personal health and safety devices (Table 6).

Table 6
Proportion of Caregivers Willing to Use Personal Health and Safety Devices
By Level of Burden

Item	Total	Level	Level	Level	Level	Level
	(A)	1	2	3	4	5*
	, ,	(B)	(C)	(D)	(E)	(F)
Personal emergency response	78	75	75	79	83B	80
system						
Electronic pill box that reminds	61	53	56	67B	65B	69B
the person you care for when to						
take medicine and which						
medicine to take						
Electronic pill box that does the	49	39	44	51B	53B	58B
same as the one above, and also						
has a health care provider						
monitor patient taking the						
medication for compliance						
Personal health monitoring	57	51	49	59	64B	68BC
system that lets people send						
medical information about						
themselves over their telephone						
lines to a health provider						
Personal health monitoring	44	36	33	43	53BC	59BC
system like that above that uses						D
TV-based equipment to send						
info to health provider						
Personal health monitoring	44	35	38	49B	58BC	45
system like that above that uses						
Internet-based equipment to						
send info to health provider						

Source: Healthy @ Home

N = 1023Small base

Capital letters in a table cell indicate that cell is statistically different from the cell the letter is in.

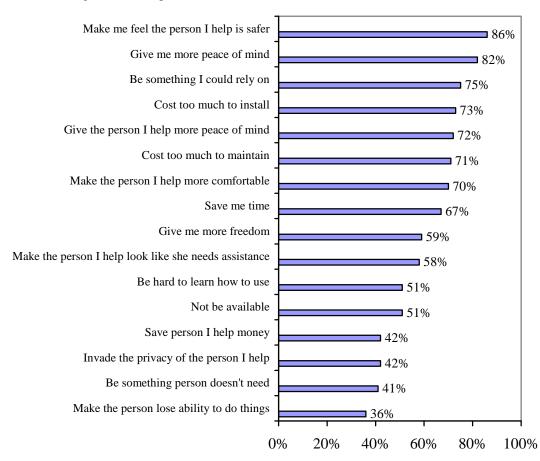
Perceived Benefits / Barriers to Using Personal Health and Wellness Devices

The top three most frequently mentioned perceptions about personal health and wellness devices reflect positive benefits including making the caregiver *feel the person I help is safer*, giving the caregiver *greater peace of mind*, and *being something the can rely on*. Other positive perceptions include giving the care recipient greater peace of mind and making the care recipient more comfortable.

Caregivers also think these items could help them meet their own needs, such as *save me time*, and *give me more freedom*.

The barriers caregivers see include costs (to install and maintain), some potential stigma (make the person I help look like she needs assistance, make the person I help lose ability to do for self). About half think these items may be hard to learn how to use, or not be available to the person they assist. However, only four in ten say these are something the person they help does not need.

Figure 16
Caregivers' Perceptions Regarding Personal Health and Wellness Devices
Q In general, these personal health and wellness devices like those mentioned would:



Source: Healthy @ Home

N = 1023

Level of burden influences caregivers' perceptions of personal health and wellness devices. Once again, level four caregivers report perceptions that are significantly different from lower level caregivers. The same is true for some items for level three caregivers (Table 7). This suggests that these caregivers could benefit most from using these items to help them fulfill their caregiving responsibilities.

Table 7
Proportion of Caregivers Who Agree or Strongly Agree with Benefits / Barriers
By Level of Burden

Total	Level	Level	Level	Level	Level
A	1	2	3	4	5*
	В	C	D	Е	F
86	82	82	88	91BC	85
82	78	76	87C	86	84
75	72	72	77	77	78
73	70	71	72	78	72
72	70	66	73	78C	69
71	70	67	66	78D	72
70	65	66	70	78BC	69
67	60	62	70	72B	72
59	48	57	68B	67B	63B
58	62	57	60	56	53
51	52	59DF	44	55F	41
51	48	55	47	52	58
42	37	42	40	50B	44
42	44	37	49E	35	42
41	46	36	44	38	37
36	38	34	41	33	30
	86 82 75 73 72 71 70 67 59 58 51 51 42 42 41	A 1 B 86 82 82 78 75 72 73 70 72 70 71 70 70 65 67 60 59 48 58 62 51 52 51 48 42 37 42 44 41 46	A 1 2 B C 86 82 82 82 78 76 75 72 72 73 70 71 72 70 66 71 70 67 70 65 66 67 60 62 59 48 57 58 62 57 51 52 59DF 51 48 55 42 37 42 42 44 37 41 46 36	A 1 2 3 B C D 86 82 82 88 82 78 76 87C 75 72 72 77 73 70 71 72 72 70 66 73 71 70 67 66 70 65 66 70 67 60 62 70 59 48 57 68B 58 62 57 60 51 52 59DF 44 51 48 55 47 42 37 42 40 42 44 37 49E 41 46 36 44	A 1 2 3 4 B C D E 86 82 82 88 91BC 82 78 76 87C 86 75 72 72 77 77 73 70 71 72 78 72 70 66 73 78C 71 70 67 66 78D 70 65 66 70 78BC 67 60 62 70 72B 59 48 57 68B 67B 58 62 57 60 56 51 52 59DF 44 55F 51 48 55 47 52 42 37 42 40 50B 42 44 37 49E 35 41 46 36 44 38

Source: Healthy @ Home

N = 1023 Small base

Capital letters indicate number in cell is significantly different from number in lettered cell.

Eight in ten caregivers say they think they would have *some* (42%) or *a great deal of difficulty* (38%) persuading the person they help to use these devices (Table 8). Less than one in five caregivers (16%) say they do not perceive any difficulty persuading the person they help to use such devices.

Caregivers who say they would have *a great deal of difficulty* persuading the person they help to use these devices are more likely to be level two (44%) and level five (47%) caregivers than level four caregivers (31%). Level three caregivers (22%) are more likely to anticipate *no difficulty* persuading their care recipient to use these devices than level one (13%) or level two (12%).

Eight in ten (81%) agree that if the person they help used a personal health and wellness device like those mentioned it would be important to them to have a customer service representative available 24 hours a day 7 days a week to provide assistance if it were needed.³³

Three-quarters (76%) would be willing to pay less than \$50 per month to have these types of personal health and wellness devices available to the person they help.³⁴

-

³³ Level three caregivers (57%) were more likely to *strongly agree* with this than level one (42%) and level four caregivers (44%). Caregivers who earn less than \$20,000 per year are more likely (56%) to *strongly agree* than those who earn over \$60,000 (41% of those who earn \$50-60,000 and 42% of those who earn \$75,000).

Level three 19%) and four (24%) were more likely to pay more (\$51-100 per month) than Level two caregivers (17%). Caregivers who live between one and two hours away from the person they help are also significantly more likely (30%) to be willing to pay more per month (\$51-100) than those who live in the same household (15%) or within 20 minutes of the care recipient (17%).

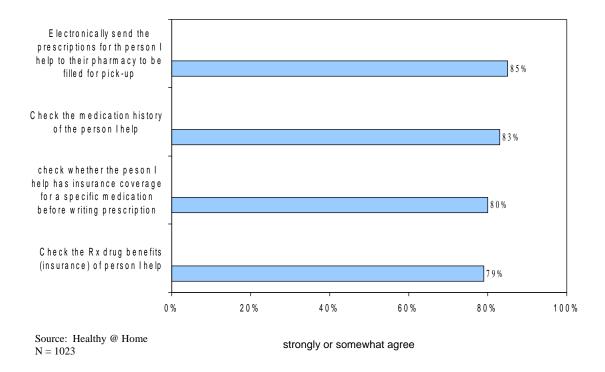
Opinions about Telepharmacy and Telemedicine

Approximately eight in ten caregivers say they would like the person they provide care to have a primary care physician who could provide common telepharmacy services (Figure 21). While this represents strong caregiver support for these services, in each case, caregivers responses are approximately ten percent lower that the responses of the 65+.

Figure 17

Caregivers Opinions About
Physician Use of Telepharmacy

Q. I would like it if the person I help had a doctor that could do the following:

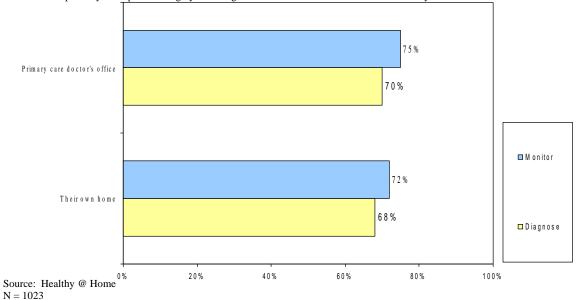


• Level of Burden: Caregivers at level 3 (89%) and 4 (86%) are significantly more likely to want a physician to be able to check the medication history of the person they help than those at level 5 (74%).

We asked caregivers a series of four questions to gain a better understanding of their opinions about using telemedicine to diagnose or monitor how the heart of the person they help is working by receiving information that is transmitted electronically to a cardiologist from two locations (primary care doctor's office or the home of the person they help). While caregivers were willing to have both tasks done from both locations, the results for caregivers were about ten percentage points lower for diagnosing a heart condition from the care recipients' home.

Figure 18 Caregiver Opinions about Telemedicine by Location and Activity

- Q How wiling 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?
- Q 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?
- Q 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 home?
- Q 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?



Diagnose cardiac condition via electronic transmission from primary care doctor's office

More level five caregivers (43%) say they are *very willing* to use this option than level one or (28%) level two caregivers (27%). Caregivers who live in the same household with their care recipient are more likely to say they are *very willing* (42%) than those that live further away (28% within 20 minutes, 23% 20 minutes to one hour away, 25% 2+ hours away).

Diagnose cardiac condition via electronic transmission from patient's home

More level four caregivers (73%) say they are *somewhat* or *very willing* to use this option than caregivers at level one (23%). However, more level five caregivers (40%) say they

are *very willing* to use this option than caregivers at lower levels (23% level one, 28% level two, 26% level three).

Caregivers who have an annual income of \$75,000+ (73%) are more willing to use this option than those who earn less (64% of those who earn \$30,000-\$50,000 and 60% of those who earn \$50,000-\$60,000.

Monitor cardiac condition via electronic transmission from primary care doctor's office

More level four (82%) and level five (84%) caregivers are *somewhat* or *very willing* to use this option than level one (72%) or level two caregivers (65%). More level five caregivers (45%) are *very willing* to use this option than level one (31%) or level three (29%).

Caregivers who earn \$75,000+ (80%) are more likely to use this option than those who earn less (70% of those who earn \$30,000 - \$50,000 and 66% of those who earn \$50,000 - \$60,000).

Caregivers who live with their care recipients (42%) are more likely to be *very willing* to use this option than those who live at a distance (32% of those who live 20 minutes away, 22% of those who live 20 minutes to one hour away).

Monitor cardiac condition via electronic transmission from patient's home

Caregivers at level four (81%) are significantly more likely to use this option than level one (66%) or level two (64%) caregivers. A greater proportion of those who live with their care recipient (36%) would be *very willing* to use this option compared to those live 20 minutes to an hour away (21%).

Caregivers at the highest and lowest income levels are equally likely to use this option, and significantly more likely to use this option than those in middle income levels (79% of those who earn less than \$20,000 and 79% of those who earn \$75,000+ compared to 65% of those that earn \$30,000-\$50,000 and 64% of those who earn \$50,000-\$60,000).

Recommendations

Older adults and caregivers could benefit by knowing more about the range of technological devices that are available today, and those that are on the horizon, that could provide greater physical safety, more peace of mind and improved social connectedness. It appears that widespread adoption of such devices will depend on whether providers can convincingly address consumers' concerns about costs and whether older adults think they need these items.

Since people generally lose their ability to be independent gradually, requiring lifestyle adjustments overtime, new consumer guidelines could help older adults and caregivers identify key functional changes which might trigger the need to consider using such devices. For example, healthy older adults with strong social support systems and caregivers in the earliest stages of caregiving are less likely to benefit from these types of technology than older adults who have experienced some physical or cognitive limitations and caregivers in the middle stages of the caregiving experience. Our research also suggests that there comes a time when care recipients need more personal attention than technology currently can offer.

On a personal level, we need more research on why caregivers think they will have difficulty persuading their care recipient to use these devices. We also need to know how these issues can be addressed if the caregiver believes using these items would improve the caregiving situation. We also need to know more about care recipients age 65+ and how they may or may not differ from people age 65+ who do not currently need assistance.

We also need more evidence-based research demonstrating the efficacy of these devices to improve the quality of life of older adults and caregivers. We need to understand more about the cost and reimbursement implications of such technology. And, we need to know more about health providers' willingness or resistance to update medical and social service support systems using these technologies.

Appendix A Proportion With Each Item In Home

Item	Older adults	Caregivers
Cable television	75*	71
DVD or VCR	91	94
A cell phone	72*	81
A computer	68*	78
Broad-band Internet service	35	51
Dial-up Internet service	42	38

^{*}Indicates proportion is similar to that reported by Forrester Research for 65+ population. However, Forrester Research reports substantially higher use of broad-band Internet service (51% of the 62+ population) than we found among the 65+ in this study.

Appendix B Detailed Methodology

65+ Survey Details

Field period: 12/07/2007 – 12/18/2007

N assigned interviews: 1180

N completes: 907

N qualified respondents: 907

Completion rate: 77%

Margin of error (50% statistic with 95% confidence): 3.3

45-75 Caregivers Survey Details

Field period: 12/07/2007 – 12/17/2007

N assigned interviews: 6306

N completes: 4446

N qualified respondents: 1023

Completion rate: 71% Qualification rate: 23%

Margin of error qualified (50% statistic with 95% confidence): 3.1



AARP Caregivers Survey (45+)- December 2007 Annotated Questionnaire

Government & Academic Research

To: AARP

From: Mike Dennis, Stefan Subias, Project Director

Date: 12/26/2007

Re: AARP – Caregivers Survey (45+) – 12/2007

Field period: 12/07/2007 - 12/17/2007

N assigned interviews: 6306

N completes: 4446

N qualified respondents: 1023

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

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AARP – Caregivers Survey (45+) - Dec 2007 -

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

Yes, currently providing	69.9%
No, but provided in the past 12 months	30.1%
No, and did not provide in the past 12 months	0.0%

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

1	67.3%
2	24.3%
3+	8.4%

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:

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

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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

[Do/Did not] provide help	70.4%
[Provide/Provided] some help	22.5%
[Provide/Provided] a lot of help	7.1%

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

[Do/Did not] provide help	65.8%
[Provide/Provided] some help	26.4%
[Provide/Provided] a lot of help	7.8%

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

Q3c. Get to and from the toilet

[Do/Did not] provide help	73.9%
[Provide/Provided] some help	19.2%
[Provide/Provided] a lot of help	6.9%

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

Q3d. Get in or out of bathtub or shower

[Do/Did not] provide help	68.8%
[Provide/Provided] some help	20.5%
[Provide/Provided] a lot of help	10.7%

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

Q3e. Deal with incontinence or diapers

[Do/Did not] provide help	78.2%
[Provide/Provided] some help	12.9%
[Provide/Provided] a lot of help	8.9%

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

Q3f. By feeding him or her

[Do/Did not] provide help	75.0%
[Provide/Provided] some help	19.2%
[Provide/Provided] a lot of help	5.8%

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

Q3g. Giving medicines, pills, or injections

[Do/Did not] provide help	52.4%
[Provide/Provided] some help	31.3%
[Provide/Provided] a lot of help	16.3%

[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

[Do/Did not] provide help	30.7%
[Provide/Provided] some help	33.5%
[Provide/Provided] a lot of help	35.8%

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

Q4b. Grocery shopping

[Do/Did not] provide help	19.4%
[Provide/Provided] some help	42.9%
[Provide/Provided] a lot of help	37.6%

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

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

[Do/Did not] provide help	27.2%
[Provide/Provided] some help	40.5%
[Provide/Provided] a lot of help	32.3%

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

Q4d. Prepare meals

[Do/Did not] provide help	36.1%
[Provide/Provided] some help	35.6%
[Provide/Provided] a lot of help	28.3%

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

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

[Do/Did not] provide help	17.5%
[Provide/Provided] some help	38.9%
[Provide/Provided] a lot of help	43.5%

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

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

[Do/Did not] provide help	58.7%
[Provide/Provided] some help	21.1%
[Provide/Provided] a lot of help	20.3%

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?

Spouse or partner	9.9%
Mother	36.2%
Father	10.7%
Mother-in-law or father-in-law	11.6%
Son or daughter	1.0%
Brother-in-law or sister-in-law	1.2%
Grandparent	1.8%
Grandparent-in-law	0.4%
Aunt or uncle	4.2%
Other relative	6.9%
Friend or neighbor	16.1%

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?

Less than 1 hour	8.5%	
1 to 8 hours	45.2%	
9 to 20 hours	24.3%	
21 to 39 hours	7.5%	
40 hours or more	14.6%	

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

In same household with me	29.3%
Less than 20 minutes away	38.4%
20 minutes to 1 hour away	18.3%
1 to 2 hours away	4.8%
More than 2 hours away	9.3%

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

In her/his own home	71.6%
In other's home	5.4%
An Independent living/retirement community	7.3%
An assisted living facility	6.6%
A nursing home	6.6%
Other	2.5%

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?

Yes	58.6%
No	41.4%

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

None	4.9%
1 – 3	33.1%
4 – 5	26.4%
6 or more	35.5%

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

I would like it if the person I [help/helped] had a doctor that could do the following:

Q10a. Check the medication history of the person I help

Strongly Agree	57.5%
Somewhat Agree	28.1%
Somewhat Disagree	9.0%
Strongly Disagree	5.4%

I would like it if the person I [help/helped] had a doctor that could do the following:

Q10b. Check the prescription drug benefits (insurance) of the person I help

Strongly Agree	49.3%
Somewhat Agree	31.8%
Somewhat Disagree	12.6%
Strongly Disagree	6.3%

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I would like it if the person I [help/helped] had a doctor that could do the following:

Q10c. Check whether the person I provide help [has/had] insurance coverage for a specific medication before writing a prescription for them

Strongly Agree	53.9%
Somewhat Agree	28.1%
Somewhat Disagree	12.0%
Strongly Disagree	6.0%

I would like it if the person I [help/helped] had a doctor that could do the following:

Q10d. Electronically send the prescriptions for the person I help to their pharmacy to be filled for pick-up

Strongly Agree	62.2%
Somewhat Agree	25.8%
Somewhat Disagree	6.8%
Strongly Disagree	5.2%

We would like to know if you have heard about using a *personal computer* in a variety of ways.

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

Yes	64.6%
No	35.4%

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

Q11b. search for health information on the Internet

Yes	91.6%
No	8.4%

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

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

Yes	55.2%
No	44.8%

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

Yes	64.1%
No	35.9%

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

Q11_1b. search for health information on the Internet

Yes	88.1%
No	11.9%

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

Yes	75.4%
No	24.6%

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.

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

Strongly Agree	33.3%
Somewhat Agree	46.2%
Somewhat Disagree	16.3%
Strongly Disagree	4.2%

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

Q12b. save me time

Strongly Agree	39.0%
Somewhat Agree	40.1%
Somewhat Disagree	17.3%
Strongly Disagree	3.5%

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

Strongly Agree	29.7%
Somewhat Agree	37.4%
Somewhat Disagree	25.6%
Strongly Disagree	7.4%

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

Strongly Agree	30.7%
Somewhat Agree	39.2%
Somewhat Disagree	22.3%
Strongly Disagree	7.8%

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

Q12e. give me more peace of mind

Strongly Agree	35.3%
Somewhat Agree	43.2%
Somewhat Disagree	16.3%
Strongly Disagree	5.1%

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Q12f. give the person I [help/helped] more peace of mind

Strongly Agree	30.4%
Somewhat Agree	39.9%
Somewhat Disagree	22.3%
Strongly Disagree	7.4%

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

Q12g. be something I could rely on

Strongly Agree	27.0%
Somewhat Agree	48.3%
Somewhat Disagree	20.3%
Strongly Disagree	4.4%

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

Q12h. not be available to the person I [help/helped]

	20.40/
Strongly Agree	22.1%
Somewhat Agree	33.2%
Somewhat Disagree	33.1%
Strongly Disagree	11.5%

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Q12i. cost too much to install

Strongly Agree	20.9%
Somewhat Agree	39.4%
Somewhat Disagree	28.6%
Strongly Disagree	11.1%

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

Q12j. cost too much to maintain

Strongly Agree	18.5%
Somewhat Agree	39.2%
Somewhat Disagree	31.2%
Strongly Disagree	11.1%

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

Q12k, be hard to learn how to use

Strongly Agree	19.7%
Somewhat Agree	34.0%
Somewhat Disagree	30.9%
Strongly Disagree	15.4%

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Q12I. invade the privacy of the person I [help/helped]

Strongly Agree	10.5%
Somewhat Agree	31.5%
Somewhat Disagree	39.4%
Strongly Disagree	18.6%

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

Q12m. make the person I [help/helped] look like he/she needs assistance

Strongly Agree	9.7%
Somewhat Agree	32.6%
Somewhat Disagree	44.3%
Strongly Disagree	13.5%

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

Q12n. make the person I [help/helped] lose the ability to do things for her or himself

Strongly Agree	5.7%
Somewhat Agree	20.7%
Somewhat Disagree	50.1%
Strongly Disagree	23.5%

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Q12o. be something the person I [help/helped] doesn't need

Strongly Agree	12.6%
Somewhat Agree	32.8%
Somewhat Disagree	39.9%
Strongly Disagree	14.7%

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

Q12p. give me more freedom

Strongly Agree	17.0%
Somewhat Agree	42.7%
Somewhat Disagree	31.3%
Strongly Disagree	9.1%

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

Q12q. other: please specify

Strongly Agree	27.0%
Somewhat Agree	29.1%
Somewhat Disagree	21.9%
Strongly Disagree	22.0%

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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.

Strongly Agree	41.4%
Somewhat Agree	34.2%
Somewhat Disagree	13.4%
Strongly Disagree	11.0%

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]?

Less than \$50	88.0%
\$51 - \$100	9.5%
More than \$100	2.5%

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?

Already use computer to stay in touch	7.5%
No difficulty	11.1%
Some difficulty	26.4%
A great deal of difficulty	55.1%

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We would like to know if you have heard about some *home safety devices* that may or may not be useful to you or the person you [help/helped].

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

Q16a. sensors that can be placed on existing home flooring that can tell when someone falls and call for help

Yes	26.7%
No	73.3%

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

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

Yes	36.0%
No	64.0%

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

Q16c. an electronic device 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)

Yes	19.1%
No	80.9%

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

Q16d. an alarm that could tell you when a door or window has been opened or closed when not expected

Yes	67.8%
No	32.2%

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

Q16e. a device in the kitchen that records the steps taken while preparing food so that if the person you provide care is interrupted it can remind her/him of the steps she/he completed

Yes	11.0%
No	89.0%

If this was available, would you [use/have used] it?

Q16_1a. sensors that can be placed on existing home flooring that can tell when someone falls and call for help

Yes	61.5%
No	38.5%

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If this was available, would you [use/have used] it?

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

Yes	62.9%
No	37.1%

If this was available, would you [use/have used] it?

Q16_1c. an electronic device 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)

Yes	63.0%
No	37.0%

If this was available, would you [use/have used] it?

Q16_1d. an alarm that could tell you when a door or window has been opened or closed when not expected

26	22.22
Yes	63.3%
No	36.7%

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If this was available, would you [use/have used] it?

Q16_1e. a device in the kitchen that records the steps taken while preparing food so that if the person you provide care is interrupted it can remind her/him of the steps she/he completed

Yes	35.9%
No	64.1%

In the previous question we asked about a variety of *home safety 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 devices like those mentioned would:

Q17a. make me feel the person I [help/helped] is safer

Strongly Agree	42.4%
Somewhat Agree	45.2%
Somewhat Disagree	10.0%
Strongly Disagree	2.3%

In general, home safety devices like those mentioned would:

Q17b. save me time

Strongly Agree	27.7%
Somewhat Agree	39.0%
Somewhat Disagree	28.2%
Strongly Disagree	5.0%

In general, home safety devices like those mentioned would:

Q17c. save the person I [help/helped] money

Strongly Agree	16.5%
Somewhat Agree	24.6%
Somewhat Disagree	43.0%
Strongly Disagree	15.8%

In general, home safety devices like those mentioned would:

Q17d. make the person I [help/helped] more comfortable

Strongly Agree	28.7%
Somewhat Agree	43.3%
Somewhat Disagree	21.8%
Strongly Disagree	6.2%

In general, home safety devices like those mentioned would:

Q17e. give me more peace of mind

Strongly Agree	41.2%
Somewhat Agree	42.4%
Somewhat Disagree	13.0%
Strongly Disagree	3.4%

Q17f. give the person I [help/helped] more peace of mind

Strongly Agree	31.3%
Somewhat Agree	43.8%
Somewhat Disagree	18.9%
Strongly Disagree	6.1%

In general, home safety devices like those mentioned would:

Q17g. be something I could rely on

Strongly Agree	22.9%
Somewhat Agree	53.3%
Somewhat Disagree	20.4%
Strongly Disagree	3.4%

In general, home safety devices like those mentioned would:

Q17h. not be available to the person I [help/helped]

Strongly Agree	13.0%
Somewhat Agree	39.5%
Somewhat Disagree	38.1%
Strongly Disagree	9.4%

Q17i. cost too much to install

Strongly Agree	29.5%
Somewhat Agree	48.4%
Somewhat Disagree	18.0%
Strongly Disagree	4.2%

In general, home safety devices like those mentioned would:

Q17j. cost too much to maintain

Strongly Agree	25.6%
Somewhat Agree	48.4%
Somewhat Disagree	21.5%
Strongly Disagree	4.6%

In general, home safety devices like those mentioned would:

Q17k. be hard to learn how to use

Strongly Agree	14.7%
Somewhat Agree	38.1%
Somewhat Disagree	37.9%
Strongly Disagree	9.4%

Q17I. invade the privacy of the person I [help/helped]

Strongly Agree	11.4%
Somewhat Agree	32.3%
Somewhat Disagree	41.5%
Strongly Disagree	14.7%

In general, home safety devices like those mentioned would:

Q17m. make the person I [help/helped] look like she/he needs assistance

Strongly Agree	14.3%
Somewhat Agree	46.5%
Somewhat Disagree	30.3%
Strongly Disagree	8.9%

In general, home safety devices like those mentioned would:

Q17n. make the person I [help/helped] lose the ability to do things for her or himself

Strongly Agree	7.9%
Somewhat Agree	26.1%
Somewhat Disagree	49.4%
Strongly Disagree	16.6%

Q17o. be something the person I [help/helped] doesn't need

Strongly Agree	13.1%
Somewhat Agree	33.1%
Somewhat Disagree	41.9%
Strongly Disagree	12.0%

In general, home safety devices like those mentioned would:

Q17p. give me more freedom

Strongly Agree	17.1%
Somewhat Agree	40.4%
Somewhat Disagree	33.0%
Strongly Disagree	9.4%

In general, home safety devices like those mentioned would:

Q17q. other: please specify

Strongly Agree	23.9%
Somewhat Agree	32.0%
Somewhat Disagree	21.7%
Strongly Disagree	22.3%

Q18. If the person I [help/helped] used a home 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.

Strongly Agree	49.4%
Somewhat Agree	34.2%
Somewhat Disagree	12.1%
Strongly Disagree	4.3%

Q19. Overall, how much would you be willing to pay per month to have these types of home safety devices available to the person you [help/helped]?

Less than \$50	77.4%
\$51 - \$100	19.1%
More than \$100	3.5%

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?

No difficulty	16.0%
Some difficulty	41.2%
A great deal of difficulty	42.7%

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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?

Q21a. a personal emergency response system where the user wears a pendant or watch that allows her/him to call for help if needed

Yes	93.7%
No	6.3%

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

Yes	20.7%
No	79.3%

Have you heard or read about the following?

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

Yes	8.2%
No	91.8%

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Have you heard or read about the following?

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

Yes	52.4%
No	47.6%

Have you heard or read about the following?

Q21e. 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

Yes	16.0%
No	84.0%

Have you heard or read about the following?

Q21f. a personal health monitoring system that does the same thing as the TV-based system, but is *Internet-based* and allows your doctor to communicate with you

Yes	15.4%
No	84.6%

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If this was available, would you [use/ have used] it?

Q21_1a. a personal emergency response system where the user wears a pendant or watch that allows her/him to call for help if needed

N.	
Yes	79.6%
No	20.4%

If this was available, would you [use/ have used] it?

Q21_1b. an electronic pill box that reminds the person you provide care when to take her/his medicine and which medicine to take

Yes	62.3%
No	37.7%

If this was available, would you [use/ have used] it?

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

Yes	49.2%
No	50.8%

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If this was available, would you [use/ have used] it?

Q21_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 their home to a health professional over their telephone lines

Yes	58.5%
No	41.5%

If this was available, would you [use/ have used] it?

Q21_1e. 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

·	
Yes	44.7%
No	55.3%

If this was available, would you [use/ have used] it?

Q21_1f. a personal health monitoring system that does the same thing as the item above, but is *Internet-based* and allows your doctor to communicate with you

Yes	44.5%
No	55.5%

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Previously we asked about a variety of *personal health and wellness* 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

Strongly Agree	39.9%
Somewhat Agree	48.2%
Somewhat Disagree	8.4%
Strongly Disagree	3.5%

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

Q22b. save me time

Strongly Agree	27.4%
Somewhat Agree	41.3%
Somewhat Disagree	25.1%
Strongly Disagree	6.2%

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

Q22c. save the person I [help/helped] money

Strongly Agree	17.3%
Somewhat Agree	26.3%
Somewhat Disagree	42.0%
Strongly Disagree	14.4%

Q22d. make the person I [help/helped] more comfortable

Strongly Agree	26.7%
Somewhat Agree	45.4%
Somewhat Disagree	22.3%
Strongly Disagree	5.6%

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

Q22e. give me more peace of mind

Strongly Agree	36.2%
Somewhat Agree	49.1%
Somewhat Disagree	10.3%
Strongly Disagree	4.4%

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

Q22f. give the person I [help/helped] more peace of mind

Strongly Agree	27.7%
Somewhat Agree	46.7%
Somewhat Disagree	19.4%
Strongly Disagree	6.2%

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Q22g. be something I could rely on

Strongly Agree	26.4%
Somewhat Agree	51.1%
Somewhat Disagree	17.8%
Strongly Disagree	4.7%

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

Q22h. not be available to the person I [help/helped]

Strongly Agree	11.5%
Somewhat Agree	41.5%
Somewhat Disagree	36.6%
Strongly Disagree	10.4%

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

Q22i. cost too much to install

Strongly Agree	22.9%
Somewhat Agree	52.9%
Somewhat Disagree	19.1%
Strongly Disagree	5.1%

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Q22j. cost too much to maintain

Strongly Agree	22.0%
Somewhat Agree	51.5%
Somewhat Disagree	21.7%
Strongly Disagree	4.9%

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

Q22k, be hard to learn how to use

Strongly Agree	14.8%
Somewhat Agree	37.9%
Somewhat Disagree	36.0%
Strongly Disagree	11.2%

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

Q22I. invade the privacy of the person I [help/helped]

Strongly Agree	10.7%
Somewhat Agree	32.9%
Somewhat Disagree	40.1%
Strongly Disagree	16.3%

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Q22m. make the person I [help/helped] look like she/he needs assistance

Strongly Agree	13.8%
Somewhat Agree	46.2%
Somewhat Disagree	29.1%
Strongly Disagree	10.9%

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

Q22n. make the person I [help/helped] lose the ability to do things for her or himself

Strongly Agree	8.6%
Somewhat Agree	28.3%
Somewhat Disagree	47.9%
Strongly Disagree	15.2%

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

Q22o. be something the person I [help/helped] doesn't need

Strongly Agree	11.3%
Somewhat Agree	31.3%
Somewhat Disagree	43.3%
Strongly Disagree	14.0%

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Q22p. give me more freedom

Strongly Agree	18.2%
Somewhat Agree	43.5%
Somewhat Disagree	28.8%
Strongly Disagree	9.5%

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

Q22q. other: please specify

Strongly Agree	24.2%
Somewhat Agree	32.1%
Somewhat Disagree	21.2%
Strongly Disagree	22.5%

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.

Strongly Agree	48.6%
Somewhat Agree	34.0%
Somewhat Disagree	13.0%
Strongly Disagree	4.4%

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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?

Less than \$50	78.4%
\$51 - \$100	18.1%
More than \$100	3.5%

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?

No difficulty	16.8%
Some difficulty	43.6%
A great deal of difficulty	39.6%

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?

Very willing	31.8%
Somewhat willing	40.4%
Somewhat unwilling	14.7%
Very unwilling	13.1%

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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*?

Very willing	29.5%
Somewhat willing	40.4%
Somewhat unwilling	18.4%
Very unwilling	11.7%

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/helped] [is/was] working by receiving information that is transmitted electronically to them from the primary (family) doctor's office?

Very willing	35.1%
Somewhat willing	42.4%
Somewhat unwilling	13.5%
Very unwilling	9.1%

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?

Very willing	31.3%
Somewhat willing	42.4%
Somewhat unwilling	16.6%
Very unwilling	9.8%

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Q30. What type of home do you live in?

A single-family detached home	72.3%
A multi-unit building (includes apartment,	
either low rise or high rise)	12.7%
A mobile home	7.2%
A semi-detached home (like a town house,	
row house, or duplex)	6.2%
Other	1.4%

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

Q31a. cable television service

Yes	72.8%
No	27.2%

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

Q31b. DVD or VCR

Yes	96.1%
No	3.9%

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

Q31c. a cell phone

Vee	92.70/
Yes	83.7%
No	16.3%

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

Q31d. a computer

Yes	81.6%
No	18.4%

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

Q31e, broad-band Internet service

Yes	54.6%
No	45.4%

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

Q31f. dial-up Internet service

Yes	41.6%
No	58.4%

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AARP Caregivers Survey (65+) – December 2007 Annotated Questionnaire

Government & Academic Research

To: AARP

From: Mike Dennis, Stefan Subias, Project Director

Date: 12/27/2007

Re: AARP – Caregivers Survey (65+) - 12/2007

Field period: 12/07/2007 - 12/18/2007

N assigned interviews: 1180

N completes: 907

N qualified respondents: 907

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

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AARP – Caregivers Survey (65+) - Dec 2007 -

Following is a list of things that may or may not be important to you.

For each one, please tell us whether it is very important, somewhat important, not very important, or not at all important to you.

Q1a. being in good health

Very Important	96.5%
Somewhat Important	3.1%
Not very Important	0.4%
Not at all Important	0.0%

For each one, please tell us whether it is very important, somewhat important, not very important, or not at all important to you.

Q1b. having the ability to do things for myself

Vory Important	94.7%
Very Important Somewhat Important	5.2%
Not very Important	0.1%
Not at all Important	0.0%

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For each one, please tell us whether it is very important, somewhat important, not very important, or not at all important to you.

Q1c. staying involved with the world and people around me

Very Important	66.6%
Somewhat Important	29.4%
Not very Important	3.6%
Not at all Important	0.4%

For each one, please tell us whether it is very important, somewhat important, not very important, or not at all important to you.

Q1d. being able to engage in regular physical exercise

Very Important	63.0%
Somewhat Important	30.2%
Not very Important	6.2%
Not at all Important	0.6%

For each one, please tell us whether it is very important, somewhat important, not very important, or not at all important to you.

Q1e. being able to deal with whatever life brings

Very Important	81.7%
Somewhat Important	16.7%
Not very Important	1.7%
Not at all Important	0.0%

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For each one, please tell us whether it is very important, somewhat important, not very important, or not at all important to you.

Q1f. having enough money to meet my needs

Very Important	79.5%
Somewhat Important	19.7%
Not very Important	0.7%
Not at all Important	0.0%

For each one, please tell us whether it is very important, somewhat important, not very important, or not at all important to you.

Q1g. continuing to learn new things

Very Important	57.4%
Somewhat Important	36.8%
Not very Important	5.5%
Not at all Important	0.2%

For each one, please tell us whether it is very important, somewhat important, not very important, or not at all important to you.

Q1h. having friends and family who are there for me

Very Important	83.6%
Somewhat Important	15.5%
Not very Important	0.9%
Not at all Important	0.0%

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For each one, please tell us whether it is very important, somewhat important, not very important, or not at all important to you.

Q1i. feeling safe and secure

Very Important	83.3%
Somewhat Important	15.5%
Not very Important	1.2%
Not at all Important	0.0%

For each one, please tell us whether it is very important, somewhat important, not very important, or not at all important to you.

Q1j. having the freedom to do what I want

Very Important	82.9%
Somewhat Important	15.6%
Not very Important	0.9%
Not at all Important	0.5%

Now, we are interested in how satisfied you currently are with each of these areas of your life.

Please tell us whether you are completely satisfied, somewhat satisfied, somewhat dissatisfied, or completely dissatisfied.

Q2a. being in good health

Completely Satisfied	28.5%
Somewhat Satisfied	53.8%
Somewhat Dissatisfied	13.5%
Completely Dissatisfied	4.1%

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Please tell us whether you are completely satisfied, somewhat satisfied, somewhat dissatisfied, or completely dissatisfied.

Q2b. having the ability to do things for myself

Completely Satisfied	46.9%
Somewhat Satisfied	39.5%
Somewhat Dissatisfied	10.7%
Completely Dissatisfied	2.8%

Please tell us whether you are completely satisfied, somewhat satisfied, somewhat dissatisfied, or completely dissatisfied.

Q2c. staying involved with the world and people around me

Completely Satisfied	44.1%
Somewhat Satisfied	47.9%
Somewhat Dissatisfied	7.4%
Completely Dissatisfied	0.6%

Please tell us whether you are completely satisfied, somewhat satisfied, somewhat dissatisfied, or completely dissatisfied.

Q2d. being able to engage in regular physical exercise

Completely Satisfied	32.6%
Somewhat Satisfied	42.1%
Somewhat Dissatisfied	20.3%
Completely Dissatisfied	4.9%

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Please tell us whether you are completely satisfied, somewhat satisfied, somewhat dissatisfied, or completely dissatisfied.

Q2e. being able to deal with whatever life brings

Completely Satisfied	44.1%
Somewhat Satisfied	45.5%
Somewhat Dissatisfied	9.3%
Completely Dissatisfied	1.2%

Please tell us whether you are completely satisfied, somewhat satisfied, somewhat dissatisfied, or completely dissatisfied.

Q2f. having enough money to meet my needs

Completely Satisfied	37.3%
Somewhat Satisfied	46.3%
Somewhat Dissatisfied	12.4%
Completely Dissatisfied	3.9%

Please tell us whether you are completely satisfied, somewhat satisfied, somewhat dissatisfied, or completely dissatisfied.

Q2g. continuing to learn new things

Completely Satisfied	40.1%
Somewhat Satisfied	51.3%
Somewhat Dissatisfied	7.9%
Completely Dissatisfied	0.6%

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Please tell us whether you are completely satisfied, somewhat satisfied, somewhat dissatisfied, or completely dissatisfied.

Q2h. having friends and family who are there for me

Completely Satisfied	67.4%
Somewhat Satisfied	27.7%
Somewhat Dissatisfied	4.1%
Completely Dissatisfied	0.8%

Please tell us whether you are completely satisfied, somewhat satisfied, somewhat dissatisfied, or completely dissatisfied.

Q2i. feeling safe and secure

Completely Satisfied	60.0%
Somewhat Satisfied	33.6%
Somewhat Dissatisfied	5.7%
Completely Dissatisfied	0.7%

Please tell us whether you are completely satisfied, somewhat satisfied, somewhat dissatisfied, or completely dissatisfied.

Q2j. having the freedom to do what I want

Completely Satisfied	57.0%
Somewhat Satisfied	34.1%
Somewhat Dissatisfied	6.9%
Completely Dissatisfied	2.0%

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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.

Strongly Agree	91.7%
Somewhat Agree	6.8%
Somewhat Disagree	1.1%
Strongly Disagree	0.5%

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

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

Strongly Agree	61.0%
Somewhat Agree	34.0%
Somewhat Disagree	4.2%
Strongly Disagree	0.9%

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

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.

Strongly Agree	39.3%
Somewhat Agree	48.3%
Somewhat Disagree	10.2%
Strongly Disagree	2.3%

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

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

Strongly Agree	82.9%
Somewhat Agree	15.9%
Somewhat Disagree	1.2%
Strongly Disagree	0.0%

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

Q3e. I would like to help my doctor monitor my health.

Strongly Agree	74.9%
Somewhat Agree	21.6%
Somewhat Disagree	2.8%
Strongly Disagree	0.7%

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

Q3f. I generally think technology is a good thing (for example personal computers, the Internet, and personal emergency response systems).

Strongly Agree	63.0%
Somewhat Agree	31.0%
Somewhat Disagree	5.3%
Strongly Disagree	0.8%

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

I wish my doctor had a device that allows him/her to do the following:

Q3g_1. Check my medication history.

Strongly Agree	73.2%
Somewhat Agree	22.9%
Somewhat Disagree	3.0%
Strongly Disagree	0.9%

I wish my doctor had a device that allows him/her to do the following:

Q3g_2. Check my prescription drug benefits (insurance).

Strongly Agree	61.8%
Somewhat Agree	30.9%
Somewhat Disagree	6.1%
Strongly Disagree	1.2%

I wish my doctor had a device that allows him/her to do the following:

Q3g_3. Check whether my insurance covers a specific medication before writing me a prescription.

Strongly Agree	67.3%
Somewhat Agree	27.8%
Somewhat Disagree	4.4%
Strongly Disagree	0.5%

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I wish my doctor had a device that allows him/her to do the following:

Q3g_4. Electronically send my prescription to my pharmacy to be filled for pickup.

Ctrongly Agree	69.00/
Strongly Agree Somewhat Agree	68.0% 25.3%
Somewhat Disagree	5.9%
Strongly Disagree	0.8%

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

Not at all Difficult	85.0%
Somewhat Difficult	13.5%
Very Difficult	1.0%
Can not do alone	0.5%

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:

Q4b. Get dressed

Not at all Difficult	87.6%
Somewhat Difficult	11.0%
Very Difficult	0.8%
Can not do alone	0.6%

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:

Q4c. Go up or down stairs

Not at all Difficult	59.7%
Somewhat Difficult	29.5%
Very Difficult	8.5%
Can not do alone	2.2%

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:

Q4d. Get in and out of the bathtub or shower

Not at all Difficult	71.4%
Somewhat Difficult	23.7%
Very Difficult	3.3%
Can not do alone	1.6%

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:

Q4e. Use the toilet

Not at all Difficult	92.4%
Somewhat Difficult	6.6%
Very Difficult	0.5%
Can not do alone	0.5%

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:

Q4f. Eat by myself

Not at all Difficult	97.7%
Somewhat Difficult	1.4%
Very Difficult	0.6%
Can not do alone	0.2%

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:

Q4g. Remembering to take my medications

Not at all Difficult	85.3%
Somewhat Difficult	12.9%
Very Difficult	1.4%
Can not do alone	0.4%

Sometimes people have difficulty doing other things. Please indicate how difficult it is to complete each of the following tasks:

Q5a. Pay bills/fill out insurance claims

Not at all Difficult	81.1%
Somewhat Difficult	14.5%
Very Difficult	2.1%
Can not do alone	2.3%

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Sometimes people have difficulty doing other things. Please indicate how difficult it is to complete each of the following tasks:

Q5b. Shop for groceries

Not at all Difficult	81.8%
Somewhat Difficult	12.5%
Very Difficult	2.6%
Can not do alone	3.0%

Sometimes people have difficulty doing other things. Please indicate how difficult it is to complete each of the following tasks:

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

Not at all Difficult	73.1%
Somewhat Difficult	20.2%
Very Difficult	3.9%
Can not do alone	2.8%

Sometimes people have difficulty doing other things. Please indicate how difficult it is to complete each of the following tasks:

Q5d. Prepare meals

Not at all Difficult	78.3%
Somewhat Difficult	16.2%
Very Difficult	3.4%
Can not do alone	2.0%

Sometimes people have difficulty doing other things. Please indicate how difficult it is to complete each of the following tasks:

Q5e. Drive or getting transportation from place to place

Not at all Difficult	82.6%
Somewhat Difficult	11.0%
Very Difficult	2.5%
Can not do alone	3.9%

Sometimes people have difficulty doing other things. Please indicate how difficult it is to complete each of the following tasks:

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

Not at all Difficult	73.6%
Somewhat Difficult	18.3%
Very Difficult	4.3%
Can not do alone	3.9%

Do you have any of the following conditions?

Q6a. Low vision or hearing impairment

Yes	39.0%
No	61.0%

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

Yes	34.3%
No	65.7%

Do you have any of the following conditions?

Q6c. Problems learning, remembering, or concentrating

Yes	15.1%
No	84.9%

Q7. Would you say your health is:

Excellent	13.1%
Good	60.6%
Fair	22.1%
Poor	4.3%

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We would like to know if you have heard about using a *personal computer* in different ways.

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

Yes	52.7%
No	47.3%

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

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

Yes	69.2%
No	30.8%

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

Q8c. search for health information on the Internet

Yes	89.0%
No	11.0%

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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

Yes	56.4%
No	43.6%

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

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

Yes	41.3%
No	58.7%

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

Q8_1c. search for health information on the Internet

Yes	85.1%
No	14.9%

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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.

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

Q9a, make me feel safer

Strongly Agree	14.8%
Somewhat Agree	53.0%
Somewhat Disagree	26.7%
Strongly Disagree	5.5%

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

Q9b. save me time

Strongly Agree	28.0%
Somewhat Agree	45.9%
Somewhat Disagree	21.4%
Strongly Disagree	4.6%

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Q9c. save me money

Strongly Agree	24.5%
Somewhat Agree	37.2%
Somewhat Disagree	32.0%
Strongly Disagree	6.3%

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

Q9d. make me more comfortable

Strongly Agree	18.7%
Somewhat Agree	49.9%
Somewhat Disagree	25.9%
Strongly Disagree	5.6%

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

Q9e. give me more peace of mind

Strongly Agree	18.9%
Somewhat Agree	47.3%
Somewhat Disagree	27.8%
Strongly Disagree	6.0%

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Q9f. give my family/friends more peace of mind

Strongly Agree	22.1%
Somewhat Agree	51.7%
Somewhat Disagree	21.9%
Strongly Disagree	4.2%

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

Q9g. be something I could rely on

Strongly Agree	20.6%
Somewhat Agree	47.6%
Somewhat Disagree	26.4%
Strongly Disagree	5.4%

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

Q9h, not be available to me

Strongly Agree	6.1%
Somewhat Agree	33.2%
Somewhat Disagree	40.5%
Strongly Disagree	20.3%

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Q9i, cost too much to install

Strongly Agree	12.5%
Somewhat Agree	50.2%
Somewhat Disagree	26.9%
Strongly Disagree	10.4%

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

Q9j. cost too much to maintain

Strongly Agree	12.3%
Somewhat Agree	47.2%
Somewhat Disagree	30.1%
Strongly Disagree	10.5%

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

Q9k, be hard to learn how to use

Strongly Agree	13.5%
Somewhat Agree	41.9%
Somewhat Disagree	33.2%
Strongly Disagree	11.4%

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Q9I. invade my privacy too much

Strongly Agree	9.7%
Somewhat Agree	38.3%
Somewhat Disagree	37.2%
Strongly Disagree	14.8%

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

Q9m. make me look like I need help

Strongly Agree	5.8%
Somewhat Agree	29.5%
Somewhat Disagree	47.1%
Strongly Disagree	17.6%

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

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

Strongly Agree	5.8%
Somewhat Agree	19.7%
Somewhat Disagree	51.7%
Strongly Disagree	22.9%

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Q9o. not be something I need

Strongly Agree	15.4%
Somewhat Agree	43.1%
Somewhat Disagree	31.6%
Strongly Disagree	9.8%

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

Q9p. other: please specify

Strongly Agree	18.2%
Somewhat Agree	29.7%
Somewhat Disagree	34.1%
Strongly Disagree	18.0%

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.

Strongly Agree	32.8%
Somewhat Agree	37.0%
Somewhat Disagree	19.3%
Strongly Disagree	10.9%

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

Less than \$50	93.6%
\$51 - \$100	6.1%
More than \$100	0.4%

We would like to know if you have heard about some home safety items

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

Q12a. sensors that can be placed on existing home flooring that can tell when someone falls and call for help

Yes	21.2%
No	78.8%

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

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

Yes	40.7%
No	59.3%

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

Q12c. 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)

Yes	36.3%
No	63.7%

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

Q12d. an alarm that could tell you when a door or window has been opened or closed when not expected

Yes	65.1%
No	34.9%

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

Q12e. 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

26	
Yes	6.3%
No	93.7%

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If this was available, would you use it?

Q12_1a. sensors that can be placed on existing home flooring that can tell when someone falls and call for help

Yes	40.9%
No	59.1%

If this was available, would you use it?

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

Yes	52.7%
No	47.3%

If this was available, would you use it?

Q12_1c. 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)

Yes	56.3%
No	43.7%

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If this was available, would you use it?

Q12_1d. an alarm that could tell you when a door or window has been opened or closed when not expected

Yes	68.5%
No	31.5%

If this was available, would you use it?

Q12_1e. 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

Yes	20.2%
No	79.8%

Previously we asked about a variety of *home safety 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 devices like those mentioned would:

Q13a. make me feel safer

Strongly Agree	31.3%
Somewhat Agree	53.6%
Somewhat Disagree	12.3%
Strongly Disagree	2.8%

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Q13b. save me time

Strongly Agree	16.8%
Somewhat Agree	39.9%
Somewhat Disagree	36.2%
Strongly Disagree	7.2%

In general, home safety devices like those mentioned would:

Q13c. save me money

Strongly Agree	10.1%
Somewhat Agree	27.3%
Somewhat Disagree	46.6%
Strongly Disagree	15.9%

Q13d. make me more comfortable

Strongly Agree	25.8%
Somewhat Agree	51.6%
Somewhat Disagree	17.0%
Strongly Disagree	5.6%

Q13e. give me more peace of mind

Strongly Agree	27.5%
Somewhat Agree	51.8%
Somewhat Disagree	16.0%
Strongly Disagree	4.6%

In general, home safety devices like those mentioned would:

Q13f. give my family/friends more peace of mind

Strongly Agree	33.0%
Somewhat Agree	50.5%
Somewhat Disagree	12.7%
Strongly Disagree	3.9%

Q13g. be something I could rely on

Strongly Agree	26.0%
Somewhat Agree	47.7%
Somewhat Disagree	21.4%
Strongly Disagree	4.9%

Q13h. not be available to me

Strongly Agree	9.7%
Somewhat Agree	42.3%
Somewhat Disagree	36.3%
Strongly Disagree	11.7%

In general, home safety devices like those mentioned would:

Q13i, cost too much to install

Strongly Agree	23.5%
Somewhat Agree	58.9%
Somewhat Disagree	14.3%
Strongly Disagree	3.3%

Q13j. cost too much to maintain

Strongly Agree	21.9%
Somewhat Agree	58.2%
Somewhat Disagree	16.4%
Strongly Disagree	3.5%

Q13k. be hard to learn how to use

Strongly Agree	11.3%
Somewhat Agree	36.5%
Somewhat Disagree	42.2%
Strongly Disagree	10.0%

In general, home safety devices like those mentioned would:

Q13I. invade my privacy too much

Strongly Agree	12.0%
Somewhat Agree	40.4%
Somewhat Disagree	37.9%
Strongly Disagree	9.7%

In general, home safety devices like those mentioned would:

Q13m. make me look like I need help

Strongly Agree	13.1%
Somewhat Agree	47.2%
Somewhat Disagree	30.6%
Strongly Disagree	9.1%

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

Strongly Agree	12.6%
Somewhat Agree	31.0%
Somewhat Disagree	43.6%
Strongly Disagree	12.8%

In general, home safety devices like those mentioned would:

Q13o. not be something I need

Strongly Agree	22.0%
Somewhat Agree	49.0%
Somewhat Disagree	25.4%
Strongly Disagree	3.6%

Q13p. other: please specify

Strongly Agree	21.1%
Somewhat Agree	37.3%
Somewhat Disagree	27.5%
Strongly Disagree	14.1%

Q14. If I used a home safety 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.

Strongly Agree	39.2%
Somewhat Agree	39.7%
Somewhat Disagree	14.0%
Strongly Disagree	7.1%

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

Less than \$50	87.1%
\$51 - \$100	11.5%
More than \$100	1.3%

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 a pendant or watch that allows her/him to call for help if needed

Yes	91.3%
No	8.7%

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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

Yes	12.9%
No	87.1%

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

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

Yes	4.7%
No	95.3%

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

Q16d. 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

Yes	48.4%
No	51.6%

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

Q16e. 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

Yes	13.1%
No	86.9%

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

Q16f. a personal health monitoring system that does the same thing as the TV-based system, but is *Internet-based* and allows your doctor to communicate with you

Yes	11.5%
No	88.5%

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 call for help if needed

Yes	61.4%
No	38.6%

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If this was available, would you use it?

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

Yes	40.5%
No	59.5%

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

Yes	30.5%
No	69.5%

If this was available, would you use it?

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 their home to a health professional over their telephone lines

Yes	48.3%
No	51.7%

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If this was available, would you use it?

Q16_1e. 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

Yes	36.1%
No	63.9%

If this was available, would you use it?

Q16_1f. a personal health monitoring system that does the same thing as the item above, but is *Internet-based* and allows your doctor to communicate with you

Yes	38.8%
No	61.2%

Previously we asked about a variety of *personal health and wellness* 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

Strongly Agree	28.7%
Somewhat Agree	51.0%
Somewhat Disagree	14.9%
Strongly Disagree	5.5%

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Q17b. save me time

Strongly Agree	18.1%
Somewhat Agree	42.4%
Somewhat Disagree	31.8%
Strongly Disagree	7.8%

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

Q17c. save me money

Strongly Agree	11.1%
Somewhat Agree	25.1%
Somewhat Disagree	48.5%
Strongly Disagree	15.2%

Q17d. make me more comfortable

Strongly Agree	22.4%
Somewhat Agree	48.7%
Somewhat Disagree	22.2%
Strongly Disagree	6.7%

Q17e. give me more peace of mind

Strongly Agree	24.4%
Somewhat Agree	50.3%
Somewhat Disagree	19.9%
Strongly Disagree	5.4%

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

Q17f. give my family/friends more peace of mind

Strongly Agree	30.6%
Somewhat Agree	48.3%
Somewhat Disagree	16.1%
Strongly Disagree	5.0%

Q17g. be something I could rely on

Strongly Agree	23.4%
Somewhat Agree	47.8%
Somewhat Disagree	23.0%
Strongly Disagree	5.9%

Q17h, not be available to me

Strongly Agree	10.4%
Somewhat Agree	42.6%
Somewhat Disagree	35.3%
Strongly Disagree	11.6%

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

Q17i, cost too much to install

Strongly Agree	25.0%
Somewhat Agree	58.5%
Somewhat Disagree	13.3%
Strongly Disagree	3.1%

Q17j. cost too much to maintain

Strongly Agree	23.7%
Somewhat Agree	58.8%
Somewhat Disagree	14.2%
Strongly Disagree	3.4%

Q17k. be hard to learn how to use

Strongly Agree	12.0%
Somewhat Agree	36.5%
Somewhat Disagree	42.5% 9.0%
Strongly Disagree	9.0%

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

Q17I. invade my privacy too much

Strongly Agree	14.2%
Somewhat Agree	38.4%
Somewhat Disagree	36.0%
Strongly Disagree	11.4%

Q17m. make me look like I need help

Strongly Agree	13.3%
Somewhat Agree	49.6%
Somewhat Disagree	28.8%
Strongly Disagree	8.3%

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

Strongly Agree	13.0%
Somewhat Agree	36.4%
Somewhat Disagree	39.9%
Strongly Disagree	10.6%

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

Q17o. not be something I need

Strongly Agree	24.0%
Somewhat Agree	48.2%
Somewhat Disagree	23.4%
Strongly Disagree	4.4%

Q17p. other: please specify

Strongly Agree	23.8%
Somewhat Agree	36.2%
Somewhat Disagree	27.2%
Strongly Disagree	12.9%

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.

Strongly Agree	40.4%
Somewhat Agree	39.2%
Somewhat Disagree	12.9%
Strongly Disagree	7.5%

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?

Less than \$50	87.6%
\$51 - \$100	11.0%
More than \$100	1.4%

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*?

Very willing	43.2%
Somewhat willing	39.8%
Somewhat unwilling	10.4%
Very unwilling	6.7%

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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*?

Very willing	34.4%
Somewhat willing	42.9%
Somewhat unwilling	15.3%
Very unwilling	7.4%

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?

Very willing	42.5%
Somewhat willing	42.1%
Somewhat unwilling	9.2%
Very unwilling	6.2%

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?*

Very willing	35.6%
Somewhat willing	40.5%
Somewhat unwilling	16.4%
Very unwilling	7.5%

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Q24. What type of home do you live in?

A single-family detached home	74.7%
A multi-unit building (includes apartment,	
either low rise or high rise)	12.4%
A mobile home	5.7%
A semi-detached home (like a town house,	
row house, or duplex)	6.0%
Other	1.2%

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

Have help given to me at my current home	87.1%
Move to a facility where care is provided	7.9%
Move to a relative's home	4.8%
Move to a friend's home	0.2%

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

Q26a. cable television service

Yes	76.6%
No	23.4%

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

Q26b. DVD or VCR

Yes	92.7%
No	7.3%

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

Q26c. a cell phone

Yes	74.0%
No	26.0%

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

Q26d. a computer

Yes	70.6%
No	29.4%

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

Q26e. broad-band Internet service

Yes	37.6%
No	62.4%

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

Q26f. dial-up Internet service

Yes	44.6%
No	55.4%

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