# Adding eldercare questions to the American Time Use Survey

*ATUS eldercare questions allow people to measure the amount of time individuals spend caring for elderly persons as well as the types of activities done as eldercare*

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The American Time Use Survey (ATUS) provides nationally representative estimates of how, where, and with whom Americans ages 15 and over spend their time. In January 2011, the ATUS introduced new questions to measure how many unpaid hours Americans spend caring for older individuals, and the new data were released in June 2012.[1] Informal eldercare is a major source of assistance for elderly persons, and the need for quality data on how much time is devoted to eldercare and how it affects caregivers' lives is becoming increasingly important as the U.S. population ages. This article details the work that was done to operationally define eldercare and to measure the time people spend providing this care. Development included a review of existing eldercare measures, focus groups with caregivers, subject matter and survey method expert reviews, internal testing and refinement of the questions, and cognitive interviews with caregivers. This article highlights the findings and conclusions of each stage in developing the questions and discusses the implementation of eldercare questions in the ATUS.

In 2011, the United States was estimated to have more than 40 million people ages 65 and over, accounting for 13 percent of the total population.[2] This number is expected to dramatically increase in the next two decades as the baby boomer generation starts to turn 65.[3] According to the U.S. Census Bureau, nearly one in five U.S. residents will be age 65 or older in 2030 since the older population is projected to grow to 72 million.[4]

Eldercare commonly refers to the informal or unpaid care that family members or friends provide aging adults, although it can sometimes include formal or paid care. With longer life spans and an increase in the number of years elderly persons live with chronic conditions or disabilities, American families are providing this type of care longer than ever before.[5] Yet, the available data on eldercare are limited. For this reason, in 2010, the Federal Interagency Forum on Aging-Related Statistics identified caregiving of older adults as a priority area for new data collection: "In recent years, it has become clear that data are needed to monitor the amount, sources, and outcomes of informal caregiving."[6]

Time use surveys provide a valuable insight into the lives of caregivers because, as one study of time use data noted, ". . . they record caring or voluntary work in the context of the other activities of people's lives."[7] To provide care, one has less time to spend on other activities, such as paid work or leisure; time use data on this topic can thus show how providers balance the time they spend in eldercare with other activities.

## About the ATUS

Since the ATUS began in 2003, the survey has provided a wealth of information about how people living in the United States allo-

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cate their time to various activities. The focus of the ATUS is on collecting a time diary in which survey respondents are asked to report their main activities sequentially for the 24-hour period that began at 4 a.m. the previous day and ended at 4 a.m. on the day of the interview. Interviews are conducted by telephone on nearly every day of the year.[8] Interviewers attempt to contact each sampled person for up to 8 weeks until they have a completed interview. During the interview, respondents provide information about when each reported activity occurred; for most activities, they also provide information about where they were and whom they were with. In addition to the time diary, the ATUS also collects information about household composition, demographics, and labor force status.[9] ATUS data files and supporting documentation, which are published annually, enable researchers to conduct a wide range of analyses.

An early goal in the development of the ATUS was to measure the time people spend providing dependent care, which includes the care of both children and adults. Since the survey began, the ATUS has collected data on the time people spend providing childcare.[10] These data have been published annually and have been used in many other research projects.[11]

Recognizing the need for quality data on eldercare, the Bureau of Labor Statistics (BLS) undertook many efforts over the years to develop questions to collect this information in the ATUS. In the early ATUS design phase, researchers tested a question that attempted to measure the time people spend providing dependent care.[12] The testing results highlighted the difficulty of trying to collect both eldercare and care of persons with disabilities with one question set. When the two types of care are compared, the demographics of those who provide care, the amount and type of care needed, and the level of strain on the caregiver are very different.[13] In part, because of these differences, interpretations of the early dependent care question varied widely and the question was never added to the survey.[14] On the basis of these findings and resource constraints, BLS decided at the time not to pursue a measure of the time people spend providing care to persons with disabilities. Instead, BLS decided to concentrate on developing a question set that would yield an accurate and useful measure of the time people spend providing eldercare. This focus was selected because of concerns about the aging of the U.S. population, potential growth in the provision of informal eldercare, and a desire to understand how eldercare providers fit eldercare activities into their lives. After extensive research and testing, a new question set designed to capture the time people spend provid-

ing eldercare and related measures was introduced to the ATUS in January 2011 and the first data were released in June 2012.

Developing eldercare questions for the ATUS included a series of steps completed by a BLS working group of economists and survey methodologists. The following sections summarize these steps and the major findings that contributed to the final questionnaire.

## Literature review

One of the first tasks in developing questions to measure the time people spend providing eldercare was to define the term and identify the eldercare activities of interest to researchers and for public policy. To do so, the BLS working group extensively reviewed eldercare literature to determine a consistent and well-accepted definition of this type of care.

*Eldercare* is the term often used to refer to the care of older adults, and it is used to distinguish among other types of caregiving, such as care of persons with disabilities. Eldercare usually refers to informal or unpaid care, but can sometimes include formal or paid care. Definitions vary by the nature of the relationship between caregiver and care recipient, the older adult's age (the minimum criterion varies between 50 and 65 years of age), the level and amount of caregiving, and the scope of caregiving activities. Researchers have even cited the lack of a standard definition.[15] However, most studies identify eldercare providers on the basis of whether an elderly recipient needs help with a given activity.[16]

The most common eldercare activities measured are assistance with the Katz Basic Activities of Daily Living (ADLs), which include bathing, dressing, feeding, toileting, and transferring, such as moving from bed to chair and back.[17] Other frequent activities of interest are the Lawton and Brody Instrumental Activities of Daily Living (IADLs).[18] IADLs can include helping with medication, transportation, telephone use, shopping, and food preparation. Since ADLs and IADLs do not fully encompass all aspects of the limitations that some older adults face, some studies have included measures of other dimensions of care, such as emotional support and companionship.[19]

The literature review highlighted the need for further research in determining how to define and measure eldercare in the ATUS. Some of the issues that needed to be addressed were the types of eldercare activities to measure in the ATUS, the characteristics of eldercare providers and recipients that are of interest to the eldercare research and policy community, and how best to collect this information in the ATUS.

## Subject matter expert panel

In September 2005, an expert panel convened at BLS to refine the concept of eldercare, determine the most appropriate method for collecting the data within the ATUS design, and obtain feedback on the kinds of measures that would best inform the eldercare research and policy communities. The panel included several experts identified as prominent researchers and policymakers in the eldercare field. Major findings from the expert panel are discussed in the following paragraphs.

*What is eldercare?* The widespread agreement was that the key concept defining eldercare is one of need. Most subject matter experts agreed that an eldercare activity is done to help an older adult who cannot do it for him- or herself. This concept helps distinguish regular activities of family life from those done as eldercare. For example, having one's mother over for dinner would be considered eldercare if the mother can no longer cook for herself. The subject matter experts agreed less about the age at which eldercare was thought to begin; some experts suggested the age of 60 while others suggested the age of 65. However, they widely agreed that the emphasis should be on the *need for care*. For research purposes, the panelists felt that knowing the exact age of the person receiving care was important. Also, most eldercare researchers expressed interest in long-term care.

*What types of eldercare activities are important to capture?* Most subject matter experts agreed that ADLs were the most important behaviors to identify. The expert panel also recommended identifying additional types of care that fall under the IADL category, such as meal preparation and transportation.

*What other information would be helpful?* The expert panel identified other information that would be useful for analysis, such as the relationship between the caregiver and the person receiving care, the number of people for whom the respondent provides care, the frequency of care, and whether the recipient lives in the same household as the provider. The expert panel also expressed interest in collecting a measure of the intensity of the care and suggested that knowing the types of care provided and the time spent providing this care would sufficiently indicate intensity.

The expert panel agreed the ATUS could provide important insight on the time tradeoffs of providing care. That is, what activities are being given up or are being done less by a person who is spending time providing eldercare? For example, on days when a person provides care, does she or he work less or spend less time in leisure? One could analyze this time tradeoff information by comparing the activities of eldercare providers with similar characteristic profiles on days they did and did not provide eldercare.[20]

*How should the ATUS collect eldercare information?* The expert panel recommended the ATUS collect information about the time respondents spend providing eldercare by asking summary questions after the time diary is collected. After ATUS respondents are identified as eldercare providers, they would then be asked whether they provided eldercare yesterday and, if so, which activities they had done as eldercare.

## Focus groups

The working group also conducted a series of focus groups to learn more about eldercare. Survey methodologists and researchers widely use focus group interviews as a way to gather qualitative data to better understand a topic. In 2009 to 2010, BLS conducted three focus groups with eldercare providers. Caregivers who participated in these groups provided input on how to define eldercare and information about the types of eldercare activities they did. One group consisted solely of caregivers to persons with Alzheimer's disease and dementia, a second group to persons with Parkinson's disease, and a third group to persons with a variety of limitations. Participants in the focus groups included those who lived with their care recipients as well as those who did not. Most provided unpaid care to a relative, although a few participants were providers of unpaid care to nonfamily members or were paid eldercare providers.

The working group wanted to collect more information on the age at which eldercare is thought to begin and the types of activities caregivers thought of as eldercare (e.g., ADLs, IADLs, emotional care). The working group sought the participants' reactions to a draft definition of eldercare that included these concepts. In addition, the working group wanted to determine whether caregivers could easily identify the eldercare activities they did throughout the day.

The findings from each focus group were generally consistent and provided useful input on defining eldercare and identifying eldercare activities. Participants provided an extensive list of care activities they engaged in and identified specific terms and phrases to include in a working definition of eldercare. The major findings are in the subsequent paragraphs.

*Age at which eldercare begins.* The focus group participants first discussed the age at which eldercare begins and whether 65 was an appropriate choice. With the age of 65 as a lower bound, activities done for someone under the age of 65 would not be considered eldercare, while activities done for someone age 65 or over would be considered eldercare. Most of the participants in the focus groups did not like defining eldercare by the age of the care recipient. When asked why, several participants felt that many aging-related conditions, such as Alzheimer's disease and dementia, can start before the age of 65 and thus they thought eldercare could begin at a lower age. Some participants were hesitant to define a lower age bound at all. While some participants suggested lower-age limits or no age limit, a few participants who were around 65 years of age felt that "elder" meant "older than me" and that a lower-age limit for eldercare should therefore be set higher than 65.

*Eldercare versus dependent care.* Participants from all three focus groups emphasized the difficulty in distinguishing eldercare from general care for someone with a disability. Several participants felt that even though disability and aging are linked, an older adult could have a disability that is not related to aging, thereby making disaggregating dependent care from eldercare difficult in this situation.

*Activities done as eldercare.* Participants provided an extensive list of activities they considered eldercare activities. The activities covered many areas; some included cleaning; home maintenance, including lawn care; driving; socializing with the care recipient; interacting with the recipient's doctors, health aides, and friends; shopping and running errands for the recipient; managing the recipient's bills and finances; assisting with hygiene and toileting; and exercising with the recipient. Participants who provided care for someone with a mental ailment, such as Alzheimer's disease or dementia, also felt strongly that eldercare includes the time they spend supervising, monitoring, or providing emotional support.

## Defining eldercare

The working group used the findings from the literature review, expert panel, and focus groups to identify the most important concepts to measure and to define the term eldercare. Two particular challenges were raised in the findings: (1) distinguishing eldercare from the care of adults with disabilities and (2) determining when eldercare begins. After much discussion and review, the working group created the following definition to aid in identifying eldercare providers: "Eldercare is providing care or assistance to an individual because of a medical condition related to aging. This care can be provided either by a family member or a nonfamily member. There is an expectation that the care will be provided on a long-term basis. Care can be provided in either a care facility, such as a nursing home, or in a residential home setting."

The working group defined a *condition related to aging* as an ongoing ailment or physical or emotional limitation that typically affects older people. Examples may include becoming frailer; having difficulty seeing, hearing, or physically moving; becoming more forgetful; tiring more quickly; or specific medical ailments that are more common among older adults. It also refers to existing conditions that become progressively worse as one ages.

This definition of eldercare focuses on a care recipient's *need for care* because of a particular condition rather than focusing on the age of the care recipient. Eldercare was defined in this way because the background research and focus group findings highlighted a disagreement about an age at which eldercare begins; however, the research and findings showed general agreement that *the need for care* because of one's condition was a key factor in the concept. The working group decided to collect information about the ages of those receiving care, because this would provide researchers who use the ATUS data files the flexibility to set a minimum age for eldercare recipients in their analyses. Focusing on the need for care because of a condition related to aging also helps to distinguish eldercare from general or dependent care.

Another important concept in this definition is that care is ongoing. The working group discussed whether care for an aging adult with a temporary condition should be considered eldercare. The literature and focus groups highlighted that in providing eldercare, the care is expected to be long-term. That is, the person being cared for will likely always need care or assistance. Therefore, the group decided that care for temporary conditions that do not require ongoing care, such as a broken leg, should be excluded from the definition of eldercare.

The working group focused on measuring informal care to elderly persons—a topic of interest to researchers and policymakers—and thus people who provide care as part of their paid job were not included in the definition of eldercare providers. For example, a paid nurse's aide would not be included in estimates of the eldercare provider population. The group also decided to exclude care that is only monetary in nature, such as paying for some good or service.

## Questionnaire development

The next step in developing measures of eldercare involved drafting a set of questions. The working group had to develop a relatively short set of questions to avoid lengthening the survey and to work within the survey's budget.[21] The first question, which asks respondents if they provided care to someone with a condition related to aging in a specified time period, identifies eldercare providers. The ATUS time diary and summary questions only capture information about activities done the day before the survey interview. Relying solely on this 1 day to identify eldercare providers would fail to capture caregivers who provide regular (but not daily) care, thus underestimating the population of caregivers. However, using too long of a reference period could negatively affect respondents' ability to accurately recall information as well as potentially overestimate the population of eldercare providers, since some care recipients may have passed away within that time period. After careful consideration, the working group decided to use a reference period ranging from 3 to 4 months. The period ranges from 3 to 4 months because, for clarity and ease of recall, it is anchored to the first of the calendar month that occurred 3 months before the interview. ATUS interviews are conducted on nearly every day of the year, so an eldercare provider interviewed near the beginning of a month would have a shorter reference period than someone interviewed near the end of a month.

The next few questions were designed to collect information about the number of persons for whom each eldercare provider cared and basic information about the eldercare recipients. The working group developed questions to capture the relationship between the caregiver and each person receiving care, the age of eldercare recipients, how long the eldercare provider had been caring for each recipient, and whether the caregiver and recipients lived in the same or different households. The working group considered adding questions to identify the types of limitations or medical conditions of the persons receiving care as a way to measure the intensity of care. However, further review revealed that collecting this information was not feasible within the scope of the ATUS. The list of impairments an elderly person might have could be long and difficult for a respondent to accurately answer within the constraints of the ATUS.

The final questions on eldercare identify caregivers who provided eldercare on the diary day (that is, the day about which they were interviewed) and the activities they did as care. The working group decided to use an ATUS "summary question" to identify eldercare activities in the time diary.[22] Exhibit 1 provides an example of how the eldercare activity summary question works. After completing the time diary and identifying respondents who had provided eldercare yesterday, the interviewer asks those respondents to identify the activities that were done as eldercare. In this example, the respondent identified the times when he was preparing breakfast, giving medication, and preparing a snack as times when he was providing eldercare.

Use of a summary-style question provides researchers working with ATUS data files the flexibility to include or exclude certain care activities in their analyses. For example, if researchers are interested in the amount of time people spend providing physical care, they can restrict their analyses to include only physical care activities and exclude other types of activities, such as watching television with the care recipient. On the other hand, if researchers are interested in the entire amount of time individuals spend providing eldercare, they can sum the time people spend in all activities identified as eldercare.

One final concept the working group sought to measure was secondary eldercare, or care provided while do-

| Exhibit 1. | Example of ATUS eldercare activity summary question | | |
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| **Activity** | **Start time** | **Stop time** | **Eldercare?** |
| Sleeping | 4:00 | 8:00 | — |
| Grooming | 8:00 | 8:20 | — |
| Preparing breakfast | 8:20 | 8:40 | Yes |
| Eating breakfast | 8:40 | 9:00 | — |
| Cleaning kitchen | 9:00 | 9:10 | — |
| Giving medication | 9:10 | 9:15 | Yes |
| Grooming | 9:15 | 9:45 | — |
| Weeding garden | 9:45 | 11:00 | — |
| Preparing a snack | 11:00 | 11:45 | Yes |

ing some other activity. The ATUS currently collects data on secondary childcare activities, and the working group thought this distinction would be useful for eldercare activities, as well. The first draft set of questions included a question to identify those times when caregivers were actively providing care, such as administering medications or preparing meals for the care recipient, versus times when the caregiver was providing passive care, such as doing a noncare activity while monitoring the care recipient or being available to offer assistance. Distinguishing main versus secondary activities proved to be problematic, as discussed in the following section.

## Questionnaire review

Once the working group drafted a set of questions, several survey methodologists and subject experts evaluated and refined the draft questions. One concern they raised was that intermittent care providers—such as someone who occasionally assists a neighbor with yard work or helps a stranger carry her or his groceries from the store to the car—may be identified as eldercare providers. The working group considered such infrequent assistance as general helping activities rather than eldercare. Including individuals who only occasionally provide care in the definition of eldercare providers would overstate the population of eldercare providers and underestimate the average time they spend providing care. In response, to screen intermittent caregivers, defined as those who helped someone with an aging-related condition only one time in the 3 to 4 months before the interview day, the working group added a question about how often respondents provide care. While the intent of this question was to refine how eldercare providers are defined, it also collects useful analytical information about how often caregivers had provided eldercare in the reference period.

## Cognitive pretesting

Researchers cognitively tested the revised questions to evaluate how well they captured the information sought, to explore participants' understanding of the questions, and to identify problems with question wording or particular concepts. The questions were tested for clarity, comprehension, length, potential sensitivity, and flow within the existing ATUS questionnaire. Two researchers conducted 26 cognitive interviews in two rounds. One group was underrepresented in the first phase of testing: persons living with the person for whom they cared. The researchers investigated this population during a second phase of testing to determine if unique issues existed relating to their interpretation of the eldercare questions. Participants were recruited from local care-provider organizations and a general-population database. Most participants had provided some type of eldercare within the 3 to 4 month reference period. Since all ATUS respondents would be asked the eldercare questions, some participants with no eldercare experience were included in the testing to ensure they were not incorrectly identified as eldercare providers.

The major findings of the two phases of the cognitive testing are highlighted in the following subsection paragraphs.

*Identifying eldercare providers.* The following introduction and question were tested in determining whether they were effective in identifying eldercare providers:

- Introduction to eldercare questions: "The next set of questions are about times you may have recently spent assisting or caring for an adult who needed help because of a condition related to aging. For example, as people grow older, it sometimes becomes difficult for them to perform various activities without help—such as grooming, driving, managing the household, taking medication, or other common activities."

- Eldercare provider question: Since the first of [fill month = 3 months ago], have you provided any such care or assistance? It doesn't matter where you provided the care—at your home, at their home, or at a care facility—but please exclude financial assistance and help you provided as part of your paid job.

Testing revealed that, with minor wording changes that improved reading flow, the introduction and first question were clear and effective in identifying eldercare providers. The examples of where care may be provided were dropped from the first question and instead added to the introduction. Many participants felt that the examples provided in the introduction were helpful.

*Condition related to aging.* The term *condition related to aging* was tested for a consistent and accurate understanding. Participants understood the term *condition related to aging* to include a wide range of ailments, including chronic illness and disabilities related to aging. While the participants in the cognitive testing understood the phrase as intended, the working group recognized that when the questions were implemented to a broader audience, some respondents might ask what the term *condition related to aging* means. Therefore, the working group developed additional guidance to clarify what is meant by this term.

If asked, interviewers are instructed to tell respondents that a condition related to aging is an ongoing ailment or physical or emotional limitation that typically affects older people. Examples are provided as well, such as becoming frailer; having difficulty seeing, hearing, or physically moving; tiring more quickly; and existing conditions that become progressively worse as one ages.

*Identifying eldercare activities done yesterday.* The following summary questions were tested to determine whether eldercare providers could identify the times or diary activities when they had provided eldercare on the diary day:

- Eldercare yesterday question: Did you provide any care or assistance yesterday?

- Eldercare diary question (only those who provided care yesterday are asked this question): At which times or during which activities did you provide that care or assistance yesterday?

These two questions worked as intended. Most participants were able to identify their caregiving activities. Some participants failed to report activities during the diary but reported them in response to these questions. A strength of the ATUS collection software is that interviewers are able to go back to the time diary and enter new activities and times if respondents remember them during the summary questions.

Exhibit 2 lists the types of eldercare activities participants reported during cognitive testing. Preparing meals was the most common activity identified. All participants who lived with their care recipient identified this activity. One participant who cared for her neighbor reported the times she was visiting with her neighbor. Another participant reported the time he was watching television with his care recipient because he was providing companionship.

*"Main" versus "secondary" care.* The working group was interested in trying to identify times when the provider may have been providing secondary, or passive, eldercare. To do so, the following question was tested:

- Main versus secondary care question: Sometimes people provide care or assistance while doing other activities. During which of the times or activities you just reported was providing care or assistance your **main** activity?

Many of the participants had problems with this question during testing. One participant thought the question was insulting because he felt that everything he did was first providing care. Other participants in the cognitive

| Exhibit 2. | Eldercare activities done yesterday, as identified during cognitive testing |
|---|---|

Adjusting care recipient's bed
Administering medication[1]
Calling recipient's property management company
Calling relatives to give status of care recipient
Checking financial account online
Checking in on care recipient[1]
Driving home from hospital
Driving to the hospital
Gathering documentation
Keeping recipient company[1]
Laundry
Letting home health aide in the house
Moving medical equipment
Preparing a meal[1]
Preparing a snack[1]
Reading to care recipient (in hospital)
Serving a meal[1]
Sitting with care recipient (in hospital)
Speaking with recipient on phone
Taking bus to post office to deliver letter
Talking with home health aide
Typing letter to caregiver group
Waking up care recipient
Watching TV with recipient

[1]These activities were identified multiple times.

tests reported that they did not understand what was being asked, felt the question was repetitive, or thought it was too difficult to divide their care activities between "main" and "secondary."

Based on feedback from the first phase of cognitive testing, a few questions were reworded for clarity and the question about main versus secondary care was dropped.

*Age limit.* Because some support for an age cutoff still existed, the second phase included testing the inclusion of a lower-bound for the age of eldercare recipients. After considering several different age minimums, the group felt 65 was a reasonable and defensible age to test.

- Eldercare provider question (with age limit): Not including financial assistance or help you provided as part of your paid job, since the first of [fill month = 3 months ago], have you provided any care or assistance for an adult age 65 or older who needed help because of a condition related to aging?

Reactions were mixed on the inclusion of a minimum age for eldercare. Although many participants said that

65 was a familiar benchmark, few felt that specifying an age was necessary. Other participants thought 65 was an arbitrary age to use.

*Implications for the survey.*    Overall, the cognitive testing results were encouraging. The final questions were clearly understood, they accurately identified eldercare providers, and they successfully collected information about care recipients and the times and activities done as eldercare. Although the age cutoff worked fine, the working group felt the question set would yield more information and flexibility if information about recipients' ages was collected rather than including an age cutoff in the definition of eldercare. (See appendix for the final question set.)

## Implementation and data release

The new eldercare questions were added to the ATUS in January 2011, and the results were first published in June 2012. Several tables on eldercare were included in the 2011 ATUS news release, including estimates on the number of eldercare providers in the U.S. civilian noninstitutional population by various demographics, the relationship between care providers and recipients, and the types of eldercare activities in which care providers engaged. The new eldercare data show that in 2011, an estimated 39.8 million people in the United States, or 16 percent of the civilian noninstitutional population ages 15 and over, were eldercare providers. A majority (56 percent) were

women. Sixty-nine percent of eldercare providers cared for only one person in 2011. On days they provided eldercare, persons spent an average of 3.1 hours providing this care; just over half of this time was associated with leisure activities (1.0 hour) and household activities (42 minutes).

The 2012 microdata files, which include eldercare data, were also released in June 2012.[23] The design of the questions allows researchers to conduct analyses based on their own definitions of what constitutes eldercare. Some possibilities include analyses based on different ages of care recipients or including or excluding certain activities. For example, someone who only is interested in physical care can exclude other types of eldercare activities, such as shopping. Researchers can also compare the time use of caregivers on days they do and do not provide care, on weekdays and weekend days, and on workdays and non-workdays, thus providing information on the time tradeoff between caregiving and other activities.

THE NEW ELDERCARE DATA enhance the information the ATUS already collects regarding caregiving activities. With the growth of the aging population and the increase in the number of American families caring for elderly persons, these additional questions allow people to measure the amount of time individuals spend caring for elderly persons. Because the ATUS is a continuous survey, the addition of these questions will enable researchers to study how time spent in eldercare changes over years to come.    □

## Notes

[1]  See "American Time Use Survey—2011 Results," USDL-12–1246 (U.S. Bureau of Labor Statistics, June 22, 2012), **http://www.bls.gov/news.release/pdf/atus.pdf**; and "Eldercare in 2011" (U.S. Bureau of Labor Statistics, 2011), **http://www.bls.gov/tus/2011_eldercare_factsheet.htm**.

[2]  See "Annual Estimates of the Resident Population by Sex and Five-Year Age Group for the United States: April 1, 2010 to July, 2011," Table 1 (U.S. Census Bureau, Population Division, July 2011), **http://www.census.gov/popest/data/national/asrh/2011/index.html**.

[3]  Baby boomers are persons born between the years 1946 and 1964. Grayson K. Vincent and Victoria A. Velkoff, "THE NEXT FOUR DECADES, The Older Population in the United States: 2010 to 2050," Current Population Reports, P25–113 (U.S. Census Bureau, 2010), **http://www.census.gov/prod/2010pubs/p25-1138.pdf**.

[4]  Ibid.

[5]  Karen D. Pyke and Vern L. Bengtson, "Caring more or less: Individualistic and collectivist systems of family eldercare," *Journal of Marriage and Family*, May 1996, pp. 379–393.

[6]  See *Older Americans 2010: Key Indicators of Well-Being*, Federal Interagency Forum on Aging-Related Statistics (Washington, DC, U.S. Government Printing Office, July 2010), p. 63.

[7]  Robin Fleming and Anne Spellerberg, *Using Time Use Data: A History of Time Use Surveys and Uses of Time Use Data* (Wellington, New Zealand, Statistics New Zealand, February 1999), p. 29, **http://www.stats.govt.nz/browse_for_stats/people_and_communities/time_use/using-time-use-data.aspx**.

[8]  Computer-Assisted Telephone Interviewing technology is used to collect the ATUS data by telephone.

[9]  For more information on the ATUS design and collection procedures, please see the American Time Use Survey User's Guide: **http://www.bls.gov/tus/atususersguide.pdf**.

[10]  For more information on childcare measures in the ATUS, see Mary Dorinda Allard, Suzanne Bianchi, Jay Stewart, and Vanessa R. Wight, "Comparing childcare measures in the ATUS and earlier time-diary studies," *Monthly Labor Review*, May 2007, pp. 27–36, **http://www.bls.gov/opub/mlr/2007/05/art3full.pdf**.

[11]  See, for example, Robert Drago, "The parenting of infants: a time use study," *Monthly Labor Review*, October 2009, pp. 33–43, **http://www.bls.gov/opub/mlr/2009/10/art3full.pdf**; and Allard, "Comparing childcare measures in the ATUS, pp. 27–36.

[12]  The dependent care question that was tested was, "In addition to the activities you just told me about, we are interested in finding out

about the time you spent looking after adults and children 13 and older who cannot take care of themselves because of a physical or psychological problem. Yesterday, did you spend any time looking after anyone living in the household 13 or older who cannot or should not be left alone because of a physical or psychological problem? Please tell me when you were looking after [name]."

[13] Andrew E. Scharlach and Karen I. Fredriksen, "Elder care versus adult care: Does care recipient age make a difference?" *Research on Aging*, March 1994, pp. 1, 43–68.

[14] For more information about cognitive testing of the American Time Use Survey, see Lisa K. Schwartz, "The American Time Use Survey: cognitive pretesting," *Monthly Labor Review*, February 2002, pp. 34–44, **http://www.bls.gov/opub/mlr/2002/02/art2full.pdf**.

[15] See Judy Singleton, "Women Caring for Elderly Family Members: Shaping Non-traditional Work and Family Initiatives. *Journal of Comparative Family Studies*, June 22, 2000, pp. 367–75; and National Alliance for Caregiving and American Association of Retired Persons, "Caregiving in the U.S.," April 2004, **http://www.caregiving.org/data/04finalreport.pdf**.

[16] See for example, National Alliance for Caregiving and AARP, *Survey on Aging and Support*, November 2009; and Statistics Canada, 2002, General Social Survey, Cycle 16.

[17] Sidney Katz, Amasa B. Ford, Roland W. Moskowitz, Beverly A. Jackson, and Marjorie W. Jaffe, "Studies of Illness in the Aged," *The Journal of the American Medical Association*, September 21, 1963, pp. 94–99.

[18] M. Powell Lawton and Elaine Brody, "Assessment of Older People: Self-Maintaining and Instrumental Activities of Daily Living," *Gerontologist*, Autumn 1969, pp. 179–86.

[19] See for example: Statistics Canada. 2002 General Social Survey, Cycle 16, Survey on Aging and Support.

[20] Respondents to the ATUS are interviewed one time only about yesterday's activities. However, one can compare the time use of eldercare providers who provided care on their diary day with the time use of eldercare providers who did not provide care on their diary day to analyze how their time use pattern differs.

[21] From 2005 to 2010, ATUS respondents were asked a series of questions about trips away from home for two or more nights in a row, during a specific reference month. However, these trips data were little used. To avoid lengthening the survey or impose additional production costs, BLS dropped the trip questions when the eldercare questions were added.

[22] Since its inception in 2003, the ATUS has successfully used summary questions to identify times when survey respondents were providing secondary childcare and to clearly identify work and volunteer activities.

[23] All ATUS data files are free to download at **http://www.bls.gov/tus/data.htm**. More information on these data files, including variable definitions, is provided in our data dictionaries, available online at **http://www.bls.gov/tus/dictionaries.htm**.

**Introduction to eldercare questions:** The next set of questions are about times you may have recently spent assisting or caring for an adult who needed help because of a condition related to aging. For example, as people grow older, it sometimes becomes difficult for them to perform various activities without help—such as grooming, driving, managing the household, taking medication, or other common activities. Care may be provided in your home, their home, or at a care facility.

**Q1:** Not including financial assistance or help you provided as part of your paid job, since the 1st of [fill = 3 months ago], have you provided any care or assistance for an adult who needed help because of a condition related to aging?

**Read if necessary:** A condition related to aging is an ongoing ailment or physical or emotional limitation that typically affects older people. Examples may include becoming more frail; having difficulty seeing, hearing, or physically moving; becoming more forgetful; tiring more quickly; or specific medical ailments that are more common among older adults. It also refers to existing conditions that become progressively worse as one ages.

- No ⟶ (Exit eldercare questions.)
- Yes ⟶ (Go to Q1a)

**Q1a:** How often did you provide this care?

- Daily
- Several times a week
- About once a week        ⟶        (Go to Q2)
- Several times a month
- Once a month
- One time ⟶ (Exit eldercare questions.)
- Other _____

**Q2:** Since the 1st of [fill month = 3 months ago], how many people have you provided this care to?_____ (Go to Q2a)

Questions Q2a through Q2c are asked for each care recipient identified in Q2. Note that the ATUS captures information about whether the care recipient lives in the same household as the care provider through the household roster asked at the beginning of the survey.

**Q2a:** Who did you give this care to?[1]

**Read if necessary:**
- Mother
- Father
- Spouse
- Partner
- Brother
- Sister
- Mother-in-law
- Father-in-law
- Aunt
- Uncle
- Friend
- Neighbor
- Grandmother or great-grandmother
- Grandfather or great-grandfather
- Other, specify _____
  (Go to Q2b)

**Q2b:** What was his or her age on [fill month = 3 months ago] 1st?
- ____Years
  (Go to Q2c)

**Q2c:** How long have you provided care to him or her?
- 0 to 5 months
- 6 to 11 months      ⟶      (Go to Q3)
- 1 year
- More than 1 year ⟶ (Go to Q2c1)

**Q2c1:** How many years? _____ (Go to Q3)

**Q3:** **Screener question:**

Did you provide any care or assistance yesterday?
- No ⟶ (Exit eldercare questions.)
- Yes ⟶ (Go to Q3a)

**Q3a:** At which times or during which activities did you provide that care or assistance yesterday? Select activities from diary.

(Exit eldercare questions.)

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[1] Relationship categories for grandfather and grandmother were added as options to the collection instrument in 2013. In 2011 and 2012, responses under the option "Other-specify," entered as "grandfather" or "grandmother" (or some variation of these terms), were assigned a relationship code of grandparent during data processing. Thus, the 2011 and 2012 data files have a relationship category for grandparent.