

# Cost and Follow-up Assessment of Fall Prevention Programs

OMB Control number 0920-0818  
exp 7/31/10

## Information Collection Request

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## Justification for Extension

We received OMB approval for OMB Control number 0920-0818 to collect data for the Cost and Follow-up Assessment of Fall Prevention Programs. This approval expires on 7/31/10. At this time we are requesting a three year extension to collect data. The explanation for this request is as follows:

In June 2009, all Matter of Balance programs implemented a new consent form. This form asked participants for permission for CDC to contact them six months after they finished the program to complete a survey. For this reason, we will not begin administering the follow-up survey to Matter of Balance participants until January 2010. We anticipate data collection will continue until June, 2013. Therefore, we are requesting an extension to July 2013.

This particular study has two components. The first is a Cost Assessment of AoA-funded Fall Prevention Programs that will collect information on the lifecycle cost of implementing Matter of Balance, Stepping On, and Moving for Better Balance programs in states funded by AoA. We are currently in the data collection phase for the cost tool and are in the process of reviewing the data received, and creating an analysis plan.

The second component of the study is the Matter of Balance Survey Instrument This instrument collects information at six-months post intervention on participants' self reported Health Status and Disability; Mental Health and Quality of Life; Matter of Balance Effects-Knowledge, Awareness and Self Efficacy; Exercise; and Falls. The data will be collected via telephone interview using a computer assisted survey instrument. This is the study that we need an extension on as explained above data collection will not begin until January 2010.

### **A. Justification**

#### **A.1. Circumstances Making the Collection of Information Necessary**

We are requesting a three year extension to the approved OMB Control number 0920-0818 titled Cost and Follow-up Assessment of Fall Prevention Programs.

The National Center for Injury Control and Prevention seeks to examine the cost of implementing AoA funded Fall Programs and to assess the maintenance of fall prevention behaviors among participants six months after completing the Matter of Balance Program. There are currently no surveys to assess the cost or impact of these AoA-funded Fall Programs. Unless we understand the impact of these fall prevention programs and what it costs to implement them, we will see falls and health care costs increase.

Falls and fall-related injuries are a public health problem that can seriously affect older adults' quality of life and are a significant burden to our health care system. CDC's 2006 Behavioral Risk Factor Surveillance System (BRFSS) provides the national estimates of fall-related injuries among people 65 years and older. Researchers found that an estimated 5.8 million older adults (15.9 percent) reported falling at least once in the previous three months and 1.8 million people reported sustaining some type of fall-related injury requiring a doctor visit or restricted activity for at least a day. These injuries have a serious impact on the quality of life of older adults. These numbers reinforce the need to raise awareness and provide scientifically proven fall prevention interventions.<sup>1</sup>

The U.S. population is aging rapidly. Currently 35 million Americans, one in eight, are age 65 or older, and by 2020 this number is expected to reach 77 million<sup>2</sup>. The aging process makes older adults particularly vulnerable to falls, which are a leading cause of disability and premature mortality. One in three older adults falls each year<sup>3</sup> and, of those who fall, 20% to 30% suffer moderate to severe injuries that result in decreased functional abilities, loss of independence, and early admission to nursing-homes.<sup>4</sup> In 2000, the direct medical cost of fall injuries among people aged 65 and over totaled just over 19 billion dollars which is similar to the costs for treating neoplastic or musculoskeletal diseases.<sup>5</sup>

In 2005, almost 16,000 older adults died from falls, and fall death rates are increasing.<sup>6</sup> After adjusting for the aging U.S. population, from 2000 to 2005 the fall death rate increased about 30% for men and about 40% for women. Falls also accounted for 1.8 million injuries treated in emergency departments; about a quarter of these patients had to be hospitalized.

Modifiable fall risk factors include biological factors such as muscle weakness, balance problems and poor vision; behavioral factors such as risky behaviors like using a chair in place of a step stool, and taking psychoactive medications such as tranquilizers and antidepressants; and environmental factors such as tripping hazards, poor lighting, and lack of stair railings.<sup>7</sup> Most falls are caused by an interaction between the person and their environment—for example, when a person with balance problems encounters a tripping hazard in a poorly lighted room. Most injuries occur from a fall onto a level surface or from a standing height, such as while turning or walking across a room, rather than from falling down stairs or off ladders.<sup>8</sup> Over half of falls occur in and around the home.

Research has shown that interventions can reduce the risk of falling by 30% to 40%<sup>6</sup>. Effective fall interventions include:

- Comprehensive clinical assessments by a health professional to identify and address medical and physical risk factors.
- Exercise that improves balance and lower body strength.
- Medication management, to reduce the number of medications, find alternative drugs, and adjust dosages to reduce side effects and interactions that can lead to falls.
- Correcting vision as much as possible.
- Home modification when combined with other intervention strategies.

Because the U.S. population is aging, falls and fall injuries among older adults will increase unless we develop effective and widely available fall prevention programs.

The Administration on Aging (AoA) has been working with the National Council on Aging (NCOA) to fund the dissemination of programs based on scientific evidence that will improve the health of older Americans. Through an AoA grant, the Partnership on Healthy Aging in Maine and eight other states are implementing and disseminating the Matter of Balance program. This fall prevention program is based on a randomized controlled trial of an intervention to reduce fear of falling.<sup>9</sup>

The 8-session Matter of Balance program has three primary purposes:

1. To reduce fear of falling
2. To improve self efficacy and a sense of control regarding risk of falling
3. To increase physical and social activity among participants

The AoA also is funding two states to provide other evidence-based fall prevention programs. The state of Oregon is conducting the Tai Chi: Moving for Better Balance program that is based on an effective randomized controlled trials conducted by Fuzhong Li at the Oregon Research Institute.<sup>10</sup> The state of Wisconsin is providing a cognitive-behavioral fall prevention program, Stepping On, that was developed at the University of Sydney in Australia.<sup>11</sup>

Since replication and dissemination of these programs, state and local programs have been responsible for monitoring programmatic impacts and costs incurred on an individual basis. CDC has collaborated with AoA and NCOA to conduct assessments of these AoA-funded programs in order to: (1) assess the impact of the Matter of Balance program on participants six months after completing the program; and (2) to determine the startup and maintenance costs of the Matter of Balance, Tai Chi: Moving for Better Balance and Stepping On programs. These assessments will increase our knowledge about these fall prevention programs and allow us to 1) provide policy and program recommendations to state and local public health agencies about the potential impact of Matter of Balance, and 2) plan further research to determine the cost-effectiveness of three ongoing fall prevention programs. Additionally, understanding the program costs will aid communities in their decision-making about implementing and disseminating these programs and help CDC understand the costs associated with broader program dissemination. Ultimately, the CDC's long-term goals are to help communities determine how to best use scarce funds to prevent older adult falls, to enable older adults to participate in effective programs to prevent falls and extend life, over time, to reduce the health care burden from older adult fall injuries. We can get accurate implementation costs of the Matter of Balance, Tai Chi and Stepping On programs through our cost template regardless of the time since implementation. However, in order to truly understand the potential impact at six-months post intervention, it is important to restrict the information collection to Matter of Balance because it has been in place for more than two years.

This information collection will also benefit CDC by contributing to Priority C within the Preventing Injuries at Home and in the Community section of the CDC's Injury Research Agenda:

- ▶ Priority C- Develop and evaluate community-based interventions to prevent falls among older, community-dwelling adults and study the dissemination of those programs.

Authority for CDC to collect this data is granted by Section 301 of the Public Health Services Act (42 U.S.C. 241) (Appendix 1).

### **A.1.A. Privacy Impact Assessment**

For both the Follow-up assessment of AoA-funded Matter of Balance programs and the Cost Assessment of AoA-funded Fall Prevention programs, no information deemed sensitive by participants will be collected for either of these projects. There may be questions that are potentially, but a respondent has the right to refuse any question he or she deems to be sensitive. The Matter of Balance Survey will collect health status information and information on personal exercise habits of participants. The Cost Assessment information collection will focus on cost data for programs. Personally identifiable information will be collected by the Booz Allen Hamilton contractors in order to contact the potential participants. Personal information will be kept secure by Booz Allen Hamilton. All computers have firewalls and password protection. Any hard copy forms will be kept in a locked filing cabinet at the Booz Allen office. Only the contractors who need access to the information to conduct the data collection will have access to personal information. CDC will receive materials that are aggregated and de-identified. Booz Allen will maintain all personal identifiable information for 6 months following the completion of the study in case any information is needed for follow-up. Files will not be maintained by the name of the individual, but by assigned ID number. There is no formal informed consent procedure for this information collection because it is not classified as research but instead as an evaluation. An evaluation that is not generalizable to the public, but merely evaluates the impacts of a program, does not require IRB approval or informed consent. However, potential participants will be given the option to refuse participation in the survey. If some participants perceive any question as sensitive, participants may refuse to respond to any question.

### **A.1.B. Overview of the Information Collection System**

#### Follow-up assessment of AoA-funded Matter of Balance programs:

We are seeking an extension of the currently approved OMB Matter of Balance Survey Instrument (Attachment 2). This instrument collects information at six-months post intervention on participants' self reported Health Status and Disability; Mental Health and Quality of Life; Matter of Balance Effects-Knowledge, Awareness and Self Efficacy; Exercise; and Falls. The data will be collected via telephone interview using a computer assisted survey instrument. Data will be collected on personal computers by Booz Allen Hamilton and backed up on a local server. Booz Allen will receive contact information for participants who attended a Matter of

Balance program six months prior to the study from the Seattle Senior Services. Seattle Senior Services is providing data collection and data analysis services for AoA grantees on a brief assessment of outcomes given to participants on the last day of the course. Booz Allen interviewers will call those participants, verify contact information and eligibility information (See interviewer script in Attachment 2) and then conduct our survey as a follow up at six-months post intervention. Booz Allen will de-identify data before sending the data to CDC. Electronic files of de-identified data will be provided to CDC via password protected email transmissions from Booz Allen for verification and analysis planning.

We will report on the variance between programs and the impacts of these programs on their participants. This information is not generalizable to the general public because it simply seeks to assess the impact of the particular group of older adults who participated in the program. Due to the variance among programs, the data will likely not be generalizable to other programs in other parts of the country, nor will the individual experiences be generalizable to other participants in the Matter of Balance program. This information collection seeks to obtain a picture of the success of the programs based on the participants who agree to respond to the survey and compare it to translation data from previous studies.

Cost Assessment of AoA-funded Fall Prevention Programs: We are also seeking an extension of the currently approved Cost Assessment Spreadsheet (Attachment 3) that will collect information on the lifecycle cost of implementing Matter of Balance, Stepping On, and Moving for Better Balance programs in states funded by AoA. Booz Allen will obtain email contact information for program directors in the funded states and email the spreadsheet to each program director to complete. When complete, the program director will return the completed spreadsheet to Booz Allen. Booz Allen will de-identify, aggregate and analyze the cost data before sending it to CDC.

The cost data will help determine the overall cost drivers for implementing a fall prevention program in a community and the variance in cost among communities. Communities may be able to better make decisions on which elements to include based on the data from this assessment.

### **Items of Information to be Collected**

For both the Follow-up assessment of AoA-funded Matter of Balance programs and the Cost Assessment of AoA-funded Fall Prevention programs:

Information in Identifiable form (IIF) will be collected by Booz Allen Hamilton, and de-identified prior to its submission to CDC. Please refer to section A.10 for further description of de-identification. Booz Allen will collect the following IIF:

- Name
- Date of Birth
- Mailing Addresses
- Phone numbers
- Email addresses

## **Identification of Website(s) and Website Content Directed at Children Under 13 Years of Age:**

There will be no websites or website content directed at children under 13 years of age for this information collection.

### **A.2. Purpose and Use of the Information Collection**

The main objectives of this assessment are to examine the costs of the three AoA-funded fall prevention programs and to understand the impact of Matter of Balance at six-month follow-up.

Follow-up assessment of AoA-funded Matter of Balance programs: Matter of Balance Follow-up assessment will extend the evidence that this program prevents fear of falling, increases self-efficacy, and increases activity levels, and determines if these outcomes are maintained after six months. Six months after completing the program, Matter of Balance participants will be interviewed to assess their knowledge and self-efficacy related to falls as taught in the course, their activity levels and exercise practices, and their self-reported falls both before and after the program. These data for the impact assessment will be collected through one interview with 425 participants from the Matter of Balance program.

Cost Assessment of AoA-funded Fall Prevention Programs: The cost assessment will provide lifecycle cost analysis, which includes the calculation of investment costs required to implement each of the three falls prevention programs, as well as the ongoing operational costs associated with maintaining a given program. These costs will be allocated over a defined period of time; depending on the average or standard amount of time these programs tend to operate (standard lifecycle analysis ranges from five to ten years). As part the lifecycle cost calculation, the data will provide a cost analysis across the programs to identify specific cost drivers, cost risks, and unique financial attributes of each program. The cost data will be collected using a cost assessment spreadsheet that will be completed by the Program Coordinators within the AoA-funded states, and returned to CDC for analysis.

The results of both the follow-up assessment for Matter of Balance and the cost assessment of the three programs will support the replication and dissemination of AoA-funded programs to reach more older adults. AoA-funded states are requesting more data on impact and cost to obtain sustainable and supplemental funding. These assessments will provide planning information for states to provide to potential funders. Booz Allen Hamilton has been contracted to conduct the information collection and analysis for both assessments.

#### **A.2.A. Privacy Impact Assessment Information**

Follow-up assessment of AoA-funded Matter of Balance programs:

The Matter of Balance survey will be used to understand the health status, behaviors, and experiences with falls and fears about falls for participants in the program at 6-months post-



intervention. The data collections will allow investigators to better understand the efficacy of the Matter of Balance program in communities in order to make appropriate policy and program recommendations for fall prevention. Currently, no other program or study is specifically looking at six-month follow-up of participants to understand long-term benefits. The original intervention research and translation research may not be indicative of the programs presently occurring in the community.

No Information in Identifiable Form (IIF) will be collected by CDC. Booz Allen Hamilton will collect IIF in order to contact participants only. In an effort to prevent a breach of security, project files will never be submitted to CDC and will remain in a password-protected file at Booz Allen location, available only to a minimum number of local project staff, and will not be reused or disclosed to any other person or entity except as required by law, for authorized oversight of the research project, or for other research for which the use or disclosure of protected health information would be permitted. CDC will receive materials that are aggregated and de-identified. Booz Allen will maintain all personal identifiable information for six months following the completion of the study in case any information is needed for follow-up.

#### Cost Assessment of AoA-funded Fall Prevention Programs:

The Cost Assessment Spreadsheet will be used to collect information on program costs for three AoA-funded programs in states with AoA grants. Booz Allen will collect information on what it costs to implement these programs in the community in order to provide CDC with a range of costs across communities and indicate specific cost drivers. The ultimate purpose of this information collection is to better inform communities that plan to implement these programs about how to budget for the program, what the start-up and ongoing costs to implement will be, what aspects of the program will drive up costs, and how to keep costs for a new program to a minimum.

No Information in Identifiable Form (IIF) will be collected by CDC. Booz Allen Hamilton will collect IIF in order to contact participants only. In an effort to prevent a breach of security, project files will never be submitted to CDC and will remain in a password-protected file at Booz Allen location, available only to a minimum number of local project staff, and will not be reused or disclosed to any other person or entity except as required by law, for authorized oversight of the research project, or for other research for which the use or disclosure of protected health information would be permitted. CDC will receive materials that are aggregated and de-identified. Booz Allen will maintain all personal identifiable information for six months following the completion of the study in case any information is needed for follow-up.

### **A.3. Use of Improved Information Technology and Burden Reduction**

Follow-up assessment of AoA-funded Matter of Balance programs: Interviewers will conduct telephone interviews with program participants and enter data directly into an electronic data collection instrument. The computer-assisted interview ensures both data accuracy and security. The survey will be implemented in English on laptop computers with appropriate skip patterns. The system will be programmed to follow skip patterns, and the questions will appear on the

computer screen in the appropriate sequence so that interviewers do not have to follow skip patterns. In addition, the program ensures that no question is left blank. If the respondent chooses to skip a question, the interviewer must enter a “Don’t Know” or “Refused” before moving to the next question. The system allows interviewers to enter text for open-ended questions as well as for “other, specify” response options. The instrument will allow interviewers to read the questions to the respondent over the phone and record the answers directly, eliminating the need for data entry after the interview. Once the answer has been selected, the computer moves to the next screen. The interviewer will enter a code for the response shown on the screen using the keyboard and will also be prompted to type in a response for each relevant question, even if the answer is simply that the respondent wishes to skip the question. Booz Allen Hamilton will de-identify these data before providing it to CDC.

Cost Assessment of AoA-funded Fall Prevention Programs: Program Coordinators will be emailed an MS Excel document that will be used to identify the cost factors for these programs. This document will include detailed instructions to complete the cost collection template, definitions for all cost factors to consider, and a sample completed template. In addition, the MS Excel document will allow some narrative description of some program attributes that will help in calculating the total cost for a specific program. As part of the cost assessment timeline, the cost analyst will conduct conference calls when the forms are distributed to train the Coordinators how to enter data into the form. Once Coordinators have completed the cost information for their program, they will send it back to Booz Allen Hamilton for aggregate analysis.

#### **A.4. Efforts to Identify Duplication and Use of Similar Information**

According to AoA and NCOA and after a Medline search, we have not found any existing studies that examine the cost and impact at six-month follow-up of these fall prevention programs. Individual programs have evaluated their programs independently, but there have been no cost assessments of the three AoA-funded programs and no six-month follow-up studies of Matter of Balance.

#### **A.5. Impact on small Businesses or Other Small Entities**

Follow-up Survey of AoA-funded Matter of Balance programs: This survey does not affect a small businesses or a small entity.

Cost Assessment of AoA-funded Fall Prevention Programs: This assessment may require a small business or entity (i.e. the site of a program) to assume the burden of learning how to use the template provided, collecting cost information to populate the template, and emailing it to the designated recipient of their information. However, these small entities are receiving grant funding from AoA to conduct the programs. They also understand the benefit of knowing the

cost drivers for implementing a new program. Additionally, all participant sites have the option of refusing to respond to all or part of the template provided.

**A.6. Consequences of Collecting the Information Less Frequently**

The research team will conduct the impact assessment and cost assessment once. Respondents will not be required to keep records after the assessment is completed. This survey is a program evaluation, not research, and is not designed to produce results that can be generalized to any programs other than the AoA-funded programs, Matter of Balance, Tai Chi: Moving for Better Balance and Stepping On. The research team will not require use of statistical data classification that has not been received and approved by OMB. The research team will not require the release of proprietary trade secrets or other confidential information. As previously stated, this data collection will inform the development, replication, and dissemination of the AoA-funded evidence-based fall prevention programs.

There are no legal obstacles to reducing the burden.

**A.7. Special Circumstances Related to the Guidelines of 5 CFR 1320.5(d)2**

None of the special circumstances are applicable for the current project; the request fully complies with 5 CFR 1320.5.

**A.8. Comments in Response to the Federal Register Notice and Efforts to Consult Outside the Agency**

- A. A notice for public comment on the proposed data collection was published in the Federal Register on April 14, 2008. No public comments were received in response to this notice (see Attachment 4).

A notice for public comment for the extension was published in the Federal Register on September 4<sup>th</sup>, 2009. No public comments were received in response to this notice (see Attachment 6)

- B. NCIPC staff consulted with the following entities and persons in 2007 and 2008 regarding this study:

Bonita Lynn Beattie, PT, MPT, MHA  
Vice President, Injury Prevention  
Center for Healthy Aging  
National Council on Aging  
1901 L Street, 4th Floor

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Washington, D.C. 20001  
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Mailstop P06  
Washington, DC 20201  
cgordon@cdc.gov  
202 245-0616

**A.9. Explanation of Any Payment or Gift to Respondents**

Participants will not be offered payments, gifts or other incentives to complete the assessments.

**A.10. Assurance of Confidentiality Provided to Respondents**

To ensure privacy and anonymity, a number of procedures will be implemented:

- Follow-up Survey of AoA-funded Matter of Balance programs: Seattle Senior Services, the organization evaluating the Matter of Balance program, will provide contact lists of participants enrolled in courses conducted within the study period. These contact lists, including phone numbers, will be sent to Booz Allen Hamilton. Booz Allen will enter the information into the participant database and a unique identification number will be assigned to each of the cases in the assessment. These will be used by Booz Allen Hamilton to verify that the interviewer has reached the correct participant. Contact information and all other identifiers will be stripped from the database before sending information to CDC.
- Cost Assessment of AoA-funded Fall Prevention Programs: All program coordinators will be sent the instrument at the same time and will be asked to return the form via email, fax or mail to Booz Allen Hamilton. Each form will

contain general information about the title of the respondent and the location of the program. Each completed form will be assigned an identification number upon receipt and aggregated by Booz Allen Hamilton. All personal identifiers will be stripped from the database before sending information to CDC.

### **Privacy Impact Assessment Information**

**A.** This submission has been reviewed by ICRO, who determined that the Privacy Act does not apply.

**B.** All electronic data will be stored and secured on Booz Allen Hamilton computers that are protected by firewalls and password-protected accounts that authorize users to access only specific network directories and network software; user rights and directory and file attributes that limit those who can use particular directories and files and services; and additional security features that the network administrator establishes for projects as needed. Only personnel from the study will have access to the information that could be used to potentially identify a respondent. Respondents will be informed that any information provided will be made anonymous and that data will be reported only in aggregate form. Files will be backed up and stored on the Booz Allen Hamilton server on a daily basis. Personnel and contractors on the study will be trained to follow the procedures for protecting the information being collected and maintained. Records will be retained and destroyed in accordance with the applicable CDC Records Control Schedule.

**C. Obtaining informed consent.** Informed consent is not needed for this information collection because it is determined to be an evaluation and, therefore, does not need IRB approval or consent. However, participants will be asked to voluntarily participate in both the cost and follow-up studies via telephone. They will be notified that they can refuse to respond to any question that they wish. No participant will be persuaded to answer any question that they determine to be sensitive.

#### **A.11. Justification for Sensitive Questions**

Attachment 2 contains the Matter of Balance survey instrument. The Cost Assessment Excel file is attached as a separate document (Attachment 3). The assessments do not include any questions that are sensitive in nature.

Follow-up assessment of AoA-funded Matter of Balance programs: Interviewers will ask for participation over the telephone after the interviewer has established he/she is speaking with the correct respondent and before any content questions are asked. Attachment 2 contains the survey instrument, including the eligibility and introduction script. Respondents can refuse any questions that they may feel are sensitive.

Cost Assessment of AoA-funded Fall Prevention Programs: Program Coordinators will provide Booz Allen Hamilton with valid email addresses to which the contractors will email the

spreadsheet form. Following receipt of the form, the Program Coordinators will participate in a conference call to train them on how to complete the cost information. Once they have completed the spreadsheets, each Program Coordinator will return the form to Booz Allen Hamilton. Providing a valid email address will serve as informed consent for the Program Coordinators who will provide the cost information for the local programs. Attachment 3 contains the survey instrument. Respondents can refuse any questions that they may feel are sensitive.

**Dealing with respondents who are upset by questions.** We do not anticipate that the participants will experience any adverse affects from participating in the study. Interviewers will receive special training in how to administer questions in a way that decreases the likelihood of respondent distress and increases the ability of the interviewer to handle any respondent who does become upset. However, if a respondent is upset by a question or determines that a question is too sensitive, they will be permitted to refuse the question. Interviewers will be trained to inform the participants that they can refuse any question.

#### **A.12. Estimates of Annualized Burden Hours and Costs**

Table 1 presents the number of respondents, frequency of response, hours per response and annual burden estimate. The cost to respondents who participate in the study will be in terms of their time only. The Follow-up Survey Screen for Matter of Balance- Introduction Script takes 3 minutes to complete. The survey instrument for the Matter of Balance participants takes forty five minutes and the cost assessment tool for AoA funded fall prevention programs takes 2 hours to complete.

Follow-up assessment of AoA-funded Matter of Balance programs: Based on the evaluation of an impact survey participant's time at \$15.43 for 48 minutes (this includes screening and survey), the response burden for each participant will be \$15.43 for the participant survey.

- ▶ The number of respondents we will contact annually is 167. We expect for a total of three years to contact 501 based on funding. Out of the 501 contacted and screened we expect to conduct 425 interviews over the three years. The criteria to identify sample participants are a random sampling process and are considered representative of the total population. We will achieve an 85% response rate for the telephone survey using refusal conversion techniques<sup>12</sup>; therefore 501 telephone calls will need to be made to obtain this sample over the three year period.
- ▶ The hours per response for the survey were derived from a test of procedures conducted in-house by the contractor using fewer than nine subjects.

- ▶ According to the Bureau of Labor Statistics, the average hourly wage for all US workers as of June 2006 was estimated to be \$19.29 per hour. This hourly average was used to calculate the cost to respondents of participating in the survey.<sup>13</sup>
- ▶ The total number of respondents for the matter of balance survey is estimated to be 425.

Cost Assessment of AoA-funded Fall Prevention Programs: Based on the evaluation of an impact survey participant's time at \$24.73 per hour, the response burden for each participant will be \$49.46 per Program Coordinator to complete the cost assessment spreadsheet.

- ▶ The number of responses to the cost tool was based on full coverage of the programs in the states conducting Matter of Balance, Tai Chi: Moving for Better Balance, or Stepping On. Based on information from NCOA and the AoA-funded states, 200 cost tools will need to be completed.
- ▶ The hours per response for the cost tool were derived from a test of procedures conducted in house by the contractor using fewer than nine subjects.
- ▶ According to the Bureau of Labor Statistics, the average hourly wage for a social and community service manager as of June 2006 was estimated to be \$24.73 per hour. This hourly wage was used to calculate the cost to respondents of the cost tool.
- ▶ The total number of respondents for the cost assessment is estimated to be 66 participants annually and 200 over the three year period.

The total annual estimated burden hours for the project will be 248 hours and the estimated annual cost will be \$5,502.00.

**Table 1. Estimated Annualized Respondent Burden Hours**

Data collection activity	Number of respondents	Frequency of response	Hours per response	Annual Burden Hours
Follow-up Survey Screen for Matter of Balance-Introduction Script	167	1	3/60	9
Follow-up Survey for Matter of Balance	142	1	45/60	107
Cost assessment of AoA-funded fall prevention programs	66	1	2	132
Total				248

**Table 2. Estimated Annualized Respondent Burden Costs**

Data collection activity	Number of respondents	Frequency of response	Average Burden per response (in hours)	Total Burden Hours	Hourly Wage Rate	Total Respondent Costs
Follow-up Survey Screen for Matter of Balance-Introduction Script	167	1	3/60	9	\$19.29	\$173.61
Follow-up Survey for Matter of Balance	142	1	45/60	107	\$19.29	\$2,064.03
Cost assessment of AoA-funded fall prevention programs	66	1	2	132	\$24.73	\$3,264.36



Total						\$5,502.00
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**A.13. Estimates of Other Total Annual Cost Burden to Respondents or Record Keepers**

This data collection activity does not include any other annual cost burden to respondents, nor to any record keepers. No capital or startup costs will be incurred.

**A.14. Annualized Cost to the Government**

Both the Matter of Balance study Follow-up survey and the Cost Assessment of AoA-funded fall prevention programs includes personnel for designing the study, recruiting participants, training the interviewers, collecting and analyzing the data, and reporting the results. The government costs include personnel costs for federal staff involved in the oversight, study design, and analysis, which include approximately 5 percent of a GS-13 step 5 scientist and 10% of a GS-12 step 5 project manager (based on Atlanta rates).

**Table 2. Estimated Annualized Cost to the Government to Conduct Analysis**

Labor	Year 1	Year 2	Year 3	Total
Planning and design, OMB and IRB review, computer programming, interviewer training, data collection, data preparation, data analysis, and report writing	\$ 12,725	\$ 2,725	\$ 2,725	\$ 38,175
<b>Other direct costs</b>				
Subcontractor	\$ 117,551	\$ 117,551	\$ 117,551	\$ 352,653
Program Coordinators	\$ 0	\$ 0	\$ 0	\$ 0
Stipend	\$ 0	\$ 0	\$ 0	\$ 0
Training stipend	\$ 0	\$ 0	\$ 0	\$ 0
Field expenses	\$ 0	\$ 0	\$ 0	\$ 0
Computing	\$ 0	\$ 0	\$ 0	\$ 0
Travel	\$ 1000			\$ 1000
Copying	\$ 500	\$ 500	\$ 500	\$ 1500
Telephone	\$ 0			\$ 0
Supplies	\$ 500			\$ 500
Postage	\$ 200			\$ 200
<b>Total estimated contract costs</b>	<b>\$ 132,476</b>	<b>\$ 30,776</b>	<b>\$ 30,776</b>	<b>\$ 394,028</b>

**Government Costs**

Personnel	Level of Effort	Tasks	Year 1	Year 2	Year 3
Epidemiologist	5%, over 1 yr period	Oversight, study and survey design, sample selection, data analysis, & consultation	\$4,745	\$4,745	\$4,745

Project Manager	10% over 1 yr period	Project management including oversight of budget and administration	\$7,980	\$7,980	\$7,980
Sub-Total By Project Year			\$12,725	\$12,725	\$12,725

The total cost to the government is \$394,028 for the three year period, which yields an estimated annual cost of \$131,342.67 to the Federal Government. This cost includes \$38,175 of government labor, \$352,653 in contractor support costs, and other incidental costs.

**A.15. Explanation for Program Changes or Adjustments**

This is an extension of the currently approved OMB Control number 0920-0818 titled Cost and Follow-up Assessment of Fall Prevention Programs. The adjustment in burden is due to annualizing the burden over three years. There have been no changes to the burden other than annualizing over three years for this extension request.

**A.16. Plans for Tabulation and Publication and Project Time Schedule**

The CDC will publish the results of the study. The timetable for the project is shown in Table 3.

After the data have been collected, a final report and summary of the findings will be prepared. The findings will consist of general descriptive analyses including frequencies, means, standard deviations, and scale scores on all survey items. The findings will also include non-response analyses and the results of logistic regression and hierarchical multiple regression.

Follow-up Assessment of AoA-funded Matter of Balance programs: The following questions will be assessed in the follow-up analysis-

1. At six-months post intervention, did the participants show a reduced fear of falling for the participants interviewed?
2. At six-month post intervention, did the participants show improved self efficacy and a sense of control regarding risk of falling?
3. At six-month post intervention, did the participants show an increase physical and social activity among participants?
4. How did the results from the survey compare to the translation study results?

Cost Assessment of AoA-funded Fall Prevention Programs:

1. What did it cost to implement a new program for each type?
2. What did it cost to maintain a program for each type?
3. What are the primary cost drivers of these programs?

**Table 3. Data Collection Timetable**

Task	End date
Develop Project	3 months prior to OMB approval
IRB non-research determination	3-6 months prior to OMB approval
Develop computer systems	6-9 months after OMB approval
Sampling	10 months after OMB approval
Develop recruiter/interviewer training materials and recruiter/interviewer training	11-16 months after OMB approval
Data Collection	30 months after OMB approval
Data cleaning and analysis	32 months after OMB approval
Data interpretation and report writing	36 months after OMB approval

**A.17. Reason(s) Display of OMB Expiration Date is Inappropriate**

The Centers for Disease Control and Prevention (CDC), National Center for Injury Prevention and Control (NCIPC), is not seeking an exemption from displaying the expiration date of OMB approval.

**A.18. Exceptions to Certification for Paperwork Reduction Act Submissions**

There are no exceptions to the certification.

## References

<sup>1</sup> <http://www.cdc.gov/od/oc/media/mmwrnews/2008/n080306.htm#1>

<sup>2</sup> US Census Bureau. Population Division, Washington, DC, 2001. [Accessed 2008 May 5]. Available: <http://www.census.gov/ipc/www/usinterimproj/natprojtab02a.pdf>.

<sup>3</sup> Hausdorff JM, Rios DA, Edelber HK. Gait variability and fall risk in community-living older adults: a 1-year prospective study. *Archives of Physical Medicine and Rehabilitation* 2001;82(8):1050-6. See also Hornbrook MC, Stevens VJ, Wingfield DJ, Hollis JF, Greenlick MR, Ory MG. Preventing falls among community-dwelling older persons: results from a randomized trial. *The Gerontologist* 1994;34(1):16-23.

<sup>4</sup> Alexander BH, Rivara FP, Wolf ME. The cost and frequency of hospitalization for fall-related injuries in older adults. *American Journal of Public Health* 1992;82(7):1020-3.

<sup>5</sup> Sterling DA, O'Connor JA, Bonadies J. Geriatric falls: injury severity is high and disproportionate to mechanism. *Journal of Trauma-Injury, Infection and Critical Care* 2001;50(1):116-9.

<sup>6</sup> CDC. Web-based Injury Statistics Query and Reporting System (WISQARS™) [Database]. Atlanta, GA: US Department of Health and Human Services, CDC. Available at [www.cdc.gov/ncipc/wisqars](http://www.cdc.gov/ncipc/wisqars).

<sup>7</sup> Stevens JA. Falls among older adults—Risk factors and prevention strategies. In: NCOA Falls Free: Promoting a National Falls Prevention Action Plan. 2005; 3-18.

<sup>8</sup> Berg WP, Alessio HM, Mills EM, Tong C. Circumstances and consequences of falls in independent community-dwelling older adults. *Age Aging* 1997;26:261-268.

<sup>9</sup> Tenstedt, S., Howland, J., Lachman, M., Peterson, E. Kasten, L., and Jette, A. Randomized, Controlled Trial of a Group Intervention To Reduce Fear of Falling and Associated Activity Restriction in Older Adults. *Journal of Gerontology*, 1998; 53b(6), 384-392. See also Healy, TC., Peng, C., Haynes, MS., McMahon, EM., Botler, JL., and Gross, L. The Feasibility and Effectiveness of Translating Matter of Balance Into a Volunteer Lay Leader Model. *Journal of Applied Gerontology*. 2008; 27; 34-50.

<sup>10</sup> Li, F. Harmer, P., Fisher, KJ., McAuley, E, Chaumeton, N, Eckstrom, E., & Wilson, NL. (2005). Tai Chi and fall reductions in older adults, a randomized controlled trial.

<sup>11</sup> Clemson, L. Cumming, RG. Kendig, H. and Twible, R. (1999). The effectiveness of a community-based program for reducing the incidence of falls among the elderly: a randomized trial. *Journal of the American Geriatrics Society*.

<sup>12</sup> [http://www.cdc.gov/BRfss/training/interviewer/04\\_section/15\\_refusal.htm](http://www.cdc.gov/BRfss/training/interviewer/04_section/15_refusal.htm)

<sup>13</sup> (<http://www.bls.gov/ncs/ocs/sp/ncbl0910.pdf>).