

## **MODULE B:**

**SURVEY MODULES TO MEASURE  
ASSISTIVE TECHNOLOGY AND  
THE HOME ENVIRONMENT:  
RECOMMENDED  
2-3 MINUTE MODULES**

**Survey Modules to Measure  
Assistive Technology and the Home Environment**

**Recommended 2-3 Minute Module**

**For additional information contact:**

**Vicki A. Freedman, Ph.D.\*  
University of Medicine and Dentistry of New Jersey  
School of Public Health  
e-mail: [vfreedman@umdnj.edu](mailto:vfreedman@umdnj.edu)**

**Emily M. Agree, Ph.D.  
Johns Hopkins Bloomberg School of Public Health  
e-mail: [eagree@jhsph.edu](mailto:eagree@jhsph.edu)**

\*This instrument was created with funding from the Department of Health and Human Service's Office of the Assistant Secretary of Planning and Evaluation in cooperation with the National Institute on Aging (R01 AG14346) and the National Center for Health Statistics. A full report is available from the authors upon request. Address correspondence to: Vicki A. Freedman, Ph.D., Professor, Department of Health Systems and Policy, University of Medicine and Dentistry of New Jersey-School of Public Health, 335 George Street, Suite 2200, New Brunswick, NJ 08903, [vfreedman@umdnj.edu](mailto:vfreedman@umdnj.edu).

## **Instructions to Train Interviewers**

**Read only response options in lower case.** If the responses to a question are typed in upper case letters, they should not be read to the respondent.

**Offer the interviewer the option of not reading repetitive response choices.**

Several of the modules involve sequences of questions with repetitive response choices. We recommend offering interviewers the option of not reading response options once respondent have demonstrated learning the response pattern, generally not before the third time.

**Provide definition if needed.** Definitions for items that may be unfamiliar to some respondents are provided. These are intended to be read only as needed. Interviewers should be trained to read definitions only if the respondent asks for clarification or definition of a term or if the respondent conveys confusion about the meaning of the question.

**Read introductory phrases in parentheses as needed for clarity.** In several cases, questions in a series use a similar introductory phrase. When a respondent is routed into a detailed follow-up sequence the introduction should not appear in parentheses and should be read. Where the questions are moving rapidly in a sequence (for example, where the respondent is saying “no” to all device use questions and skips past the detailed use items) the introductory phrase should appear parenthetically and may be included as needed for clarity.

**Instructions for new construction and home improvement (HE module).** When respondents have made improvements (e.g., upgraded a grab bar) or renovations to an existing home (e.g., remodeled a bathroom), they should code the upgraded features as “added (or upgraded).” If respondents have difficulty separating out the cost of these features from the rest of the renovation/building costs, interviewers should repeat the list of items that were added and ask them to focus on the cost of only those features. If the respondent is unable to separate the cost of the feature from the larger project then mark ‘don’t know’.

### **Note on Conventions Used in Instrument**

CATI instructions appear in white text boxes. Notes about question interdependencies across sections appear in yellow text boxes. Definitions appear in grey text boxes. Variable names used in the pilot study appear in red.

# HOME ENVIRONMENT MODULE

We are interested in features of your home and items you have to make your daily activities easier, safer, or so you can do them on your own. First I have some questions about the inside of your home.

**HE-1. Is your home part of a building that has two or more apartments or units with a common or shared entrance?**

**BLDGUNIT**

- 1. YES
- 2. NO
- 7. REFUSED
- 8. DON'T KNOW

**NOTE TO USER**

HE-1 is used to fill items in the Mobility and Other Devices Module (MO-2.1b, MO-2.2b, MO-2.3b, MO-2.4b, MO-2.1c, MO-2.2c, MO-2.3c, and MO-2.4c).

**HE-11. Is your living space on more than one floor?**

**HOMELVL**

- 1. YES [GO TO HE-12]
- 2. NO
- 7. REFUSED
- 8. DON'T KNOW

} READ INTRO “Whether or not you use them, does your home have...” AND GO TO HE-12.5 ]

**HE-12. Whether or not you use it, does your home have...**

<p><b>HE-12.1 a bedroom, kitchen, and bath on the same floor?</b></p> <p><b>FLORHOME</b></p> <ul style="list-style-type: none"> <li>1. YES</li> <li>2. NO</li> <li>-7. REFUSED</li> <li>-8. DON'T KNOW</li> </ul>		
<p><b>HE-12.3</b> [Whether or not you use it, does your home have... ] <b>a chair lift or stair glide?</b></p> <p><b>LIFTHOME</b></p> <ul style="list-style-type: none"> <li>1. YES [GO TO HE-12.3a]</li> <li>2. NO</li> <li>-7. REFUSED</li> <li>-8. DON'T KNOW</li> </ul> <p style="text-align: right;">} [GO TO HE-12.4]</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>DEFINITION (IF NEEDED):</b> A chair lift or stair glide is a motorized chair that runs up and down a staircase. You ride on a seat and get on and off at the top and bottom of the stairs.</p> </div>	<p><b>HE-12.3a Was it there when you moved in or was it added?</b></p> <p><b>LIFTADD</b></p> <ul style="list-style-type: none"> <li>1. THERE WHEN MOVED IN</li> <li>2. ADDED (OR UPGRADED)</li> <li>-7. REFUSED</li> <li>-8. DON'T KNOW</li> </ul>	<p><b>HE-12.3b In the last 30 days when you went upstairs or downstairs, did you use the chair lift or stair glide ...</b></p> <p><b>LIFT30</b></p> <ul style="list-style-type: none"> <li>1. every time</li> <li>2. most times</li> <li>3. sometimes</li> <li>4. rarely, or</li> <li>5. never?</li> <li>6. DIDN'T GO UPSTAIRS OR DOWNSTAIRS</li> <li>-7. REFUSED</li> <li>-8. DON'T KNOW</li> </ul> <p>[READ INTRO “Whether or not you use it, does your home have ...” AND FILL IN BLANK WITH ITEM IN HE-12.4 ]</p>

<p><b>HE-12.4</b> [Whether or not you use them, does your home have...]<b> handrails in any of the staircases?</b></p> <p>1. YES [GO TO HE-12.4a]</p> <p>2. NO -7. REFUSED -8. DON'T KNOW } [GO TO HE-12.5]</p>	<p><b>HE-12.4a</b> Were these rails there when you moved in or were any of them added?</p> <p>1. THERE WHEN MOVED IN 2. ADDED (OR UPGRADED) -7. REFUSED -8. DON'T KNOW</p>	<p><b>HE-12.4b</b> In the last 30 days when you went upstairs or downstairs, did you use the handrails...</p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? 6. DIDN'T GO UPSTAIRS OR DOWNSTAIRS -7. REFUSED -8. DON'T KNOW</p> <p>[READ INTRO "Whether or not you use it, does your home have ..." AND FILL IN BLANK WITH ITEM IN HE-12.5 ]</p>
<p><b>HE-12.5</b> [Whether or not you use them, does your home have...]<b> handrails in any of the hallways?</b></p> <p><b>RAILIHOM</b></p> <p>1. YES [GO TO HE-12.5a]</p> <p>2. NO -7. REFUSED -8. DON'T KNOW } [GO TO HE-12.6]</p>	<p><b>HE-12.5a</b> Were these rails there when you moved in or were any of them added?</p> <p><b>RAILIADD</b></p> <p>1. THERE WHEN MOVED IN 2. ADDED (OR UPGRADED) -7. REFUSED -8. DON'T KNOW</p>	<p><b>HE-12.5b</b> In the last 30 days, when you went down the hallway, did you use the handrails ...</p> <p><b>RAILI30</b></p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? -7. REFUSED -8. DON'T KNOW</p> <p>[READ INTRO "Whether or not you have use it, does your home have ..." AND FILL IN BLANK WITH ITEM IN HE-12.6]</p>

<p><b>HE-12.6</b> [Whether or not you use them, does your home have...] <b>an emergency call or personal response system to help if you fall?</b></p> <p><b>EMERHOME</b></p> <p>1. YES (1) [GO TO HE-12.6a]</p> <p>2. NO (2) -7. REFUSED -8. DON'T KNOW } [GO TO HE-13]</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>DEFINITION (IF NEEDED):</b> This is a system you use to call someone to come if you fall or need help. You can wear it around your neck or it can be attached to the wall.</p> </div>	<p><b>HE-12.6a</b> Was this system there when you moved in or was it added?</p> <p><b>EMERADD</b></p> <p>1. THERE WHEN MOVED IN 2. ADDED (OR UPGRADED) -7. REFUSED -8. DON'T KNOW</p>	<p><b>HE-12.6b</b> In the last 30 days, have you used this system to call for help?</p> <p><b>EMER30</b></p> <p>1. YES 2. NO -7. REFUSED -8. DON'T KNOW</p>
--	---	---

**HE-13. Whether or not you use it, does your home have...**

<p><b>HE-13.1</b> a stall shower separate from a tub?</p> <p><b>SHOWBATH</b></p> <p>1. YES 2. NO -7. REFUSED -8. DON'T KNOW</p>		
<p><b>HE-13.2</b> Whether or not you use them, does your home have any grab bars in the shower or tub area?</p> <p><b>BARBATH</b></p> <p>1. YES [GO TO HE-13.2a] 2. NO -7. REFUSED -8. DON'T KNOW } [GO TO HE-13.3]</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>DEFINITION (IF NEEDED):</b> A grab bar is designed to help you steady yourself. It may be attached to the wall or built in to the tub or shower. Do not include</p> </div>	<p><b>HE-13.2a</b> Were these grab bar there when you moved in or were any of them added?</p> <p><b>BARADD</b></p> <p>1. THERE WHEN MOVED IN 2. ADDED (OR UPGRADED) -7. REFUSED -8. DON'T KNOW</p>	<p><b>HE-13.2b</b> In the last 30 days, when you bathed or showered, did you use the grab bars ...</p> <p><b>BAR30</b></p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? -7. REFUSED -8. DON'T KNOW [READ INTRO "Whether or not you use it, does your home have ..." AND FILL IN BLANK WITH ITEM IN HE-13.3]</p>

<p><b>HE-13.3</b> [Whether or not you use it, does your home have...] <b>a seat for the shower or tub?</b></p> <p><b>SEATBATH</b></p> <p>1. YES [GO TO HE-13.3a]  2. NO } [GO TO HE -14]  -7. REFUSED }  -8. DON'T KNOW }</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>DEFINITION (IF NEEDED):</b>  This includes a chair, bench, or stool that you put in the shower or tub, or a seat that is built in.</p> </div>	<p><b>HE-13.3a</b> <b>Was this seat there when you moved in or was it added?</b></p> <p>1. THERE WHEN MOVED IN  2. ADDED (OR UPGRADED)  -7. REFUSED  -8. DON'T KNOW</p>	<p><b>HE-13.3b</b> <b>In the last 30 days, when you bathed or showered, did you use the seat...</b></p> <p><b>SEAT30</b></p> <p>1. every time  2. most times  3. sometimes  4. rarely, or  5. never?  -7. REFUSED  -8. DON'T KNOW</p> <p>[READ INTRO “Whether or not you use them, does your home have...” AND FILL IN BLANK WITH ITEM IN HE-14.1]</p>
--	---	--

<p><b>HE-14.1</b> [Whether or not you use them, does your home have...] <b>grab bars around any of the toilets?</b></p> <p><b>TOILBAR</b></p> <p>1. YES [GO TO HE-14.1a]  2. NO } [GO TO HE-14.2]  -7. REFUSED }  -8. DON'T KNOW }</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>DEFINITION (IF NEEDED):</b>  A grab bar is designed to help you steady yourself. It may be attached to the wall or part of a frame that goes over the toilet. Do not include towel racks.</p> </div>	<p><b>HE-14.1a</b> <b>Were these grab bars there when you moved in or were any of them added?</b></p> <p><b>TOILADD</b></p> <p>1. THERE WHEN MOVED IN  2. ADDED (OR UPGRADED)  -7. REFUSED  -8. DON'T KNOW</p>	<p><b>HE-14.1b</b> <b>In the last 30 days, when you used the toilet, did you use the grab bars ...</b></p> <p><b>TOIL30</b></p> <p>1. every time  2. most times  3. sometimes  4. rarely, or  5. never?  -7. REFUSED  -8. DON'T KNOW</p> <p>[READ INTRO “Does your home have...” AND FILL IN BLANK WITH ITEM IN HE-14.2]</p>
--	--	--

<p><b>HE-14.2</b> [Does your home have...] a raised or modified toilet seat?</p> <p><b>MODSEAT</b></p> <p>1. YES [GO TO HE-14.2a]  2. NO  -7. REFUSED  -8. DON'T KNOW } [GO TO HE-15-INTRO]</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>DEFINITION (IF NEEDED):</b>  This includes a seat that is up higher than usual, either because the toilet or seat is raised, or a chair that fits over the toilet. Do not include portable urinals, commodes,</p> </div>	<p><b>HE-14.2a</b> Was the raised or modified seat there when you moved in or was it added?</p> <p>1. THERE WHEN MOVED IN  2. ADDED (OR UPGRADED)  -7. REFUSED  -8. DON'T KNOW</p>	
---	--	--

**MOBILITY AND OTHER DEVICES MODULE**

The next questions are about getting around both outside and inside your home.

**MO-1.** In the last 30 days, have you used a cane, walker, wheelchair, or scooter, yes or no?

**USECANE**

- 1. YES [GO TO MO-2]
- 2. NO [GO TO MO-2.5]
- 7. REFUSED [GO TO MO-2]
- 8. DON'T KNOW [GO TO MO-2]

**MO-2 CATI FILL INSTRUCTIONS**

IF (HE-1=1) THEN display “**home or building**” in MO-2.1b, MO-2.2b, MO-2.3b, MO-2.4b and “**building**” in MO-2.1c, MO-2.2c, MO-2.3c, and MO-2.4c  
ELSE IF (HE-1=2, -7, or -8) THEN display “**home**” in MO-2.1b, MO-2.2b, MO-2.3b, MO-2.4b, MO-2.1c, MO-2.2c, MO-2.3c, and MO-2.4c

IF (MO-1=1) THEN display “**Okay, I’d like to ask you a few more questions about these items.**”



**MO-2. In the last 30 days, did you use ...**

<p><b>MO-2.1 a cane?</b> <b>CANEUSE</b></p> <p>1. YES [GO TO MO-2.1 a] 2. NO -7. REFUSED -8. DON'T KNOW</p> <p>} [GO TO MO-2.2]</p> <div style="border: 1px solid black; padding: 5px; background-color: #e0e0e0;"> <p><b>DEFINITION (IF NEEDED):</b> Include here straight canes, walking sticks, and multi-pronged canes. Do not include white canes to help you walk if you are blind, since we'll ask about vision aids like that later.</p> </div>	<p><b>MO-2.1a In the last 30 days, when you got out of a bed or chair, how often did you use your cane to help? Would you say ...</b> <b>CANEBED</b></p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? -7. REFUSED -8. DON'T KNOW</p>	<p><b>MO-2.1b In the last 30 days, when you walked around <u>inside</u> your {home/ home or building}, how often did you use your cane?</b> <b>CANEWALK</b></p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? -7. REFUSED -8. DON'T KNOW</p>	<p><b>MO-2.1c In the last 30 days, when you <u>left</u> your {home/ building} how often did you use your cane?</b> <b>CANEOUT</b></p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? -7. REFUSED -8. DON'T KNOW [READ INTRO "In the last 30 days, did you use ..." AND FILL IN BLANK WITH ITEM IN MO-2.2]</p>
<p><b>MO-2.2 [In the last 30 days, did you use] a walker?</b> <b>WALKUSE</b></p> <p>1. YES [GO TO MO-2.2 a] 2. NO -7. REFUSED -8. DON'T KNOW</p> <p>} [GO TO MO-2.3]</p>	<p><b>MO-2.2a In the last 30 days, when you got out of a bed or chair, how often did you use your walker to help? Would you say ...</b> <b>WALKBED</b></p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? -7. REFUSED -8. DON'T KNOW</p>	<p><b>MO-2.2b In the last 30 days, when you walked around <u>inside</u> your {home/ home or building}, how often did you use your walker?</b> <b>WALKWALK</b></p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? -7. REFUSED -8. DON'T KNOW</p>	<p><b>MO-2.2c In the last 30 days, when you <u>left</u> your {home/ building} how often did you use your walker?</b> <b>WALKOUT</b></p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? -7. REFUSED -8. DON'T KNOW [READ INTRO "In the last 30 days, did you use ..." AND FILL IN BLANK WITH ITEM IN MO-2.3]</p>

<p><b>MO-2.3</b> [In the last 30 days, did you use] a wheelchair? <b>WHELUSE</b></p> <p>1. YES [GO TO MO-2.3 a]</p> <p>2. NO -7. REFUSED -8. DON'T KNOW } [GO TO MO-2.4]</p>	<p><b>MO-2.3a</b> In the last 30 days, when you got out of a bed or chair, how often did you use your wheelchair to help? Would you say ... <b>WHELBED</b></p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? -7. REFUSED -8. DON'T KNOW</p>	<p><b>MO-2.3b</b> In the last 30 days, when you went around <u>inside</u> your {home/ home or building}, how often did you use your wheelchair? <b>WHELWALK</b></p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? -7. REFUSED -8. DON'T KNOW</p>	<p><b>MO-2.3c</b> In the last 30 days, when you <u>left</u> your {home/ building}, how often did you use your wheelchair? <b>WHELOUT</b></p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? -7. REFUSED -8. DON'T KNOW [READ INTRO "In the last 30 days, did you use ..." AND FILL IN BLANK WITH ITEM IN MO-2.4]</p>
<p><b>MO-2.4</b> [In the last 30 days, did you use] a scooter? <b>SCTRUSE</b></p> <p>1. YES [GO TO MO-2.4a]</p> <p>2. NO -7. REFUSED -8. DON'T KNOW } [GO TO MO-2.5]</p>	<p><b>MO-2.4a</b> Do you own or rent this scooter?</p> <p>1. YES [GO TO MO-2.4b]</p> <p>2. NO -7. REFUSED -8. DON'T KNOW } [GO TO MO-2.5]</p>	<p><b>MO-2.4b</b> In the last 30 days, when you went around <u>inside</u> your {home/home or building}, how often did you use your scooter? Would you say ... <b>SCTRWALK</b></p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? -7. REFUSED -8. DON'T KNOW</p>	<p><b>MO-2.4c</b> In the last 30 days, when you <u>left</u> your {home/ building}, how often did you use your scooter? <b>SCTRROUT</b></p> <p>1. every time 2. most times 3. sometimes 4. rarely, or 5. never? -7. REFUSED -8. DON'T KNOW</p>
<p><b>MO-2.5</b> [In the last 30 days, have you used] a motorized cart or electric scooter at the store? <b>MOTGROC</b></p> <p>1. YES 2. NO -7. REFUSED -8. DON'T KNOW</p>			

**MO-3. The next questions are about some other items that you may use to make your daily activities easier, safer, or so that you can do them on your own. In the last 30 days, have you used ...**

<p><b>MO-3.1 a hearing aid or other hearing device?</b> <b>HEARAID</b></p>	<p>1. YES 2. NO -7. REFUSED -8. DON'T KNOW</p>
<p><b>MO-3.2 [In the last 30 days, have you used ...] glasses or contacts?</b> <b>GLASSES</b></p>	<p>1. YES 2. NO -7. REFUSED -8. DON'T KNOW</p>
<p><b>MO-3.3 [In the last 30 days, have you used ...] vision aids other than glasses?</b> <b>VISION</b></p>	<p>1. YES 2. NO -7. REFUSED -8. DON'T KNOW</p> <div data-bbox="846 506 1354 695" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p><b>DEFINITION (IF NEEDED):</b> Vision aids include things like a magnifying glass or a white cane to help you walk if you are blind.</p> </div>
<p><b>MO-3.4 [In the last 30 days, have you used ...] a reacher or grabber?</b> <b>REACHER</b></p>	<p>1. YES 2. NO -7. REFUSED -8. DON'T KNOW</p> <div data-bbox="846 793 1354 940" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p><b>DEFINITION (IF NEEDED):</b> A reacher or grabber is used to help reach or grasp objects.</p> </div>

**END**

# **DEVELOPMENT OF AN ASSISTIVE TECHNOLOGY AND ENVIRONMENTAL ASSESSMENT INSTRUMENT FOR NATIONAL SURVEYS: FINAL REPORT**

## Files Available for This Report

### **Part I: Recommended Modules and Instrument Development Process**

HTML: <http://aspe.hhs.gov/daltcp/reports/ATEAdevI.htm>

PDF: <http://aspe.hhs.gov/daltcp/reports/ATEAdevI.pdf>

#### ***Also available separately:***

Module A. Survey Modules to Measure Assistive Technology and the Home Environment: Recommended 8-10 Minute Modules

<http://aspe.hhs.gov/daltcp/reports/ATEAdevI-A.pdf>

Module B. Survey Modules to Measure Assistive Technology and the Home Environment: Recommended 2-3 Minute Module

<http://aspe.hhs.gov/daltcp/reports/ATEAdevI-B.pdf>

### **Part II: Pilot Study Results for Recommended Items**

HTML: <http://aspe.hhs.gov/daltcp/reports/ATEAdevII.htm>

PDF: <http://aspe.hhs.gov/daltcp/reports/ATEAdevII.pdf>

#### ***Also available separately:***

Module A. Home Environment Module

<http://aspe.hhs.gov/daltcp/reports/ATEAdevII-A.pdf>

Module B. Mobility and Other Devices Module

<http://aspe.hhs.gov/daltcp/reports/ATEAdevII-B.pdf>

Module C. Effectiveness/Participation Module

<http://aspe.hhs.gov/daltcp/reports/ATEAdevII-C.pdf>

Module D. Communication Technology Module

<http://aspe.hhs.gov/daltcp/reports/ATEAdevII-D.pdf>

Module E. Residual ADL and IADL Difficulty Module

<http://aspe.hhs.gov/daltcp/reports/ATEAdevII-E.pdf>

Appendix I. Crosswalk of Question Numbers from Pilot Test and Final Recommended Modules

<http://aspe.hhs.gov/daltcp/reports/ATEAdevII-apI.pdf>

Appendix II. Technology and Aging Pilot Survey: Instrument for the Pilot Study

<http://aspe.hhs.gov/daltcp/reports/ATEAdevII-apII.pdf>