



U.S. Department of Health and Human Services  
Assistant Secretary for Planning and Evaluation  
Office of Disability, Aging and Long-Term Care Policy



# **COMPENDIUM OF HOME MODIFICATION AND ASSISTIVE TECHNOLOGY POLICY AND PRACTICE ACROSS THE STATES**

## **VOLUME I: FINAL REPORT**

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This report was prepared under contract #HHS-100-03-0008 between HHS's ASPE/DALTCP and Abt Associates, Inc. For additional information about this subject, you can visit the DALTCP home page at [http://aspe.hhs.gov/\\_/office\\_specific/daltcp.cfm](http://aspe.hhs.gov/_/office_specific/daltcp.cfm) or contact the ASPE Project Officers, Gavin Kennedy and Hakan Aykan, at HHS/ASPE/DALTCP, Room 424E, H.H. Humphrey Building, 200 Independence Avenue, S.W., Washington, D.C. 20201. Their e-mail addresses are: [Gavin.Kennedy@hhs.gov](mailto:Gavin.Kennedy@hhs.gov) and [Hakan.Aykan@hhs.gov](mailto:Hakan.Aykan@hhs.gov).

**COMPENDIUM OF HOME MODIFICATION AND  
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ACROSS THE STATES  
Volume I: Final Report**

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# EXECUTIVE SUMMARY

Various studies have examined the positive benefits of assistive technology (AT; e.g., adapted computers, powered mobility devices, augmentative communication devices (ACDs)), and home modifications (HM; e.g., structural changes such as widening doorways or building an access ramp) in enhancing the abilities of persons with disabilities and the elderly to function independently, safely, and successfully in their home environments (Mann, *et al.*, 1999; Verbrugge and Sevak, 2002; Calkins and Namazi, 1991). Much has also been written about the large baby boom population, the associated rise in sheer numbers of individuals with disabilities and the resulting need for growth in the availability and financing of long-term care services (Merlis, 2004; National Academy of Social Insurance, 2005; O'Brien, 2005).

However, few studies have examined or described the financing, coverage, and general availability of HM and AT in states, particularly through Medicaid. Little is currently known about Medicaid state policy and practice with regard to AT and HM, and the consequential impact on public spending and planning for long-term care. Many state home and community-based service (HCBS) waiver programs list AT and/or HM as covered Medicaid services. However, existing administrative datasets cannot easily convey the degree to which consumers access AT and HM services or the extent to which Medicaid, state-specific, or other programs pay for these services. The absence of basic information led the U.S. Department of Health and Human Services' Office of the Assistant Secretary for Planning and Evaluation (ASPE) to commission this compilation of Medicaid coverage policies and practices for AT and HM services across the 50 states and the District of Columbia. ASPE seeks to understand Medicaid's role, specifically, in paying for AT and HM, as Medicaid is a major source of payment for long-term care, accounting for 47 percent of spending for nursing home and home care services in 2002 (O'Brien, 2005). About half of Medicaid long-term care spending is for services to the elderly; the rest is for services to non-elderly disabled people, especially people with developmental disabilities (O'Brien, 2005) -- two populations heavily reliant on AT and HM services.

The purpose of this *Compendium of Home Modification and Assistive Technology Policy and Practice Across the States* is to establish a baseline knowledge of the scope of AT and HM services that states make available to Medicaid-eligible adults. This study provides federal and state policymakers with basic information to inform planning and policy development. It also provides other stakeholders, including consumers, with valuable information about Medicaid State Plan and HCBS waiver coverage of AT and HM.

The report addresses three main questions:

- *To what extent do Medicaid State Plans and HCBS waivers cover AT and HM services?*

- *What are the processes available to Medicaid recipients to obtain AT and HM services?*
- *What mechanisms -- if any -- do states use to control use and costs of AT and HM services?*

Data that inform this volume were from reviews of relevant web sites, from reviews of Medicaid provider manuals, from limited discussions with state representatives (Medicaid State Plan Home Health/Durable Medical Equipment (DME) and HCBS waiver personnel). In all, this report covers 51 Medicaid State Plans and 202 HCBS waivers. Volume II of this report includes a profile of each state's coverage of HM and AT services through Medicaid. By and large, relevant state personnel verified information contained therein.

## **Key Definitions**

There are important distinctions between equipment and services collectively referred to as AT and those equipment and services encompassed under the rubric of HM; thus, throughout this report, the two types of services are categorized and discussed separately. AT is a broad term that encompasses any technology to increase, maintain, or improve functional capabilities of individuals with disabilities (Assistive Technology Act of 1998). As such, the use of AT fosters a person's independence, safety, and quality of life. HM include any change to a particular location that fosters the independence and safety of individuals with disabilities or that allows people to carry out their daily tasks more easily (Pynoos, *et al.*, 1998). HM can range from installation of inexpensive items (e.g., grab-bars) to more costly structural changes such as widening of doorways, renovation of bathrooms and kitchens, and installation of ramps.

## **Key Findings**

The key findings stem from the three main areas of inquiry: (1) the extent and types of AT and HM services offered by State Plans and HCBS waivers; (2) the processes available to Medicaid-eligible recipients to facilitate access to AT and HM; and (3) the policies and practices employed by states to limit or restrict access to AT and HM services.

### ***The extent to which AT and HM services are offered by Medicaid State Plans and HCBS waivers.***

Almost every HCBS waiver includes AT and HM as listed services, while Medicaid State Plans more greatly limit what they include as AT and HM. Even though most states report including AT and/or HM, considerable variation exists in how states define and refer to AT and HM.

- AT services covered most frequently by Medicaid State Plans include ACDs and power or custom wheelchairs or wheelchair adaptations.
- The majority of Medicaid State Plans do not cover HM, personal emergency response systems (PERS), or vehicle modifications (VM).
- 173 of the 202 waivers reviewed include HM, 159 include AT, 124 include PERS, and 64 of the waivers reportedly include VM, mostly through the mental retardation/developmental disabilities (MR/DD) waivers.
- Both Medicaid State Plans and HCBS waivers describe coverage of AT services in their provider manuals. However, states almost never refer to these services as “assistive technology”; rather, the services are listed in the Medicaid coverage manuals under DME or prosthetics services.

***The processes available to Medicaid recipients to obtain AT and HM services.***

Most HCBS waivers -- and some state plans (11) -- offer service coordination or case management to recipients in order to facilitate access to AT and HM services, and both types of Medicaid programs use health professionals such as physical and occupational therapists and speech-language pathologists or therapists to assess recipient need for AT or HM services. The majority of state plans require physician orders for AT and HM services, while only half of the waiver programs list that as a requirement.

***The mechanisms used by states to control use and costs associated with AT and HM services.***

Most state HCBS waivers list many AT and HM services as available to multiple target populations in need of these services (e.g., aged and disabled, MR/DD, traumatic brain injury). However, the scope of this study did not permit investigation of how and to what degree access to services might be limited through prior authorization procedures and medical necessity or other criteria.

Almost all Medicaid State Plans use “medical necessity” criteria when determining coverage for AT and HM services, and half of the HCBS waivers studied use these criteria. For those waiver programs that do not use “medical necessity” criteria (n=28), some use “functional” language to determine if AT or HM services should be covered, rather than “medical” language or “medical necessity” criteria. This functional approach to coverage determination may be more aligned with the intent of the 1915(c) waivers to maintain the independence of the elderly and persons with disabilities in the community.

Almost all Medicaid State Plans and HCBS waivers studied require prior authorization of some sort for AT and HM services.



State HCBS waiver programs use multiple mechanisms to limit or restrict waiver expenditures, whereas Medicaid State Plans have few limits (but less extensive AT/HM coverage).

## **Implications for Further Research**

The findings suggest that additional research would need to examine scope of coverage and use of services. As described earlier, the scope of this project does not include the extent to which Medicaid-eligible persons actually receive the AT and/or HM service they might require. Such a study might require in-depth interviews of state agency officials (e.g., utilization review representatives, waiver case managers, coverage policy experts) and examination of claims data to determine actual use and cost. Further research might examine what impact the provision of AT and HM through Medicaid has on other health and long-term care use and spending.

# I. INTRODUCTION

An accessible and safe living and work environment is fundamental to the quality of life of both older adults and younger persons with disabilities and chronic health conditions. Assistive technology (AT; e.g., adapted computers, powered mobility devices, augmentative communication devices (ACDs)), and home modifications (HM; e.g., structural changes such as widening doorways or building an access ramp) can enhance the physical and sensory functioning of persons with disabilities and the elderly, and enable them to function independently, safely, and successfully in their home environments. AT and HM can also help prevent secondary problems like accidents and falls, increase safety and independence, and reduce institutionalization, thereby enhancing the overall quality of life for people with disabilities (Mann, *et al.*, 1999; Verbrugge and Sevak, 2002; Calkins and Namazi, 1991).

Little is currently known about Medicaid state policy and practice with regard to AT and HM, and the consequential impact on public spending and planning for long-term care. Many state home and community-based service (HCBS) waiver programs list AT and/or HM as covered Medicaid services. However, existing administrative datasets cannot easily convey the degree to which consumers access AT and HM services or the extent to which Medicaid, state-only, or other programs pay for these services. The absence of basic information led the U.S. Department of Health and Human Services' (HHS) Office of the Assistant Secretary for Planning and Evaluation (ASPE) to commission this compilation of Medicaid coverage policies and practices for AT and HM services across the 50 states and the District of Columbia. ASPE seeks to understand Medicaid's role, specifically, in paying for AT and HM, as Medicaid is a major source of payment for long-term care, accounting for 47 percent of spending for nursing home and home care services in 2002 (O'Brien, 2005). About half of Medicaid long-term care spending is for services to the elderly; the rest is for services to non-elderly disabled people, especially people with developmental disabilities (O'Brien, 2005) -- two populations heavily reliant on AT and HM services.

The purpose of this *Compendium of Home Modification and Assistive Technology Policy and Practice Across the States* is to establish a baseline knowledge of the scope of AT and HM services that states make available to Medicaid-eligible adults. This study provides federal and state policymakers with basic information to inform planning and policy development. It also provides other stakeholders, including consumers, with valuable information about Medicaid State Plan and HCBS waiver coverage of AT and HM.

Section 2 provides a description of study methods. Section 3 offers background information regarding AT and HM definitions, a review of the literature, and relevant laws and regulations that influence the provision of AT and HM. Section 4 presents an overview of findings regarding Medicaid coverage policies and practices across the states, including the degree to which Medicaid State Plans cover AT and/or HM, how consumers access AT and HM services across state plans and HCBS waivers, and any

restrictions imposed by state programs on reimbursement for AT and HM equipment and services. Section 5 provides a detailed explanation of the terms used to describe each state's Medicaid State Plan and HCBS waiver program. Volume II of this report includes a profile of each state's coverage of HM and AT services through Medicaid. By and large, relevant state personnel verified information contained therein.

## **2. METHODOLOGY**

To inform the development of the state profiles and determine the scope of this investigation, ASPE and the project team convened a Technical Advisory Group (TAG). Based on feedback from the TAG and a review of the literature, the definition of AT and HM was limited to services and equipment that are used primarily to facilitate independent living and promote health and safety. As such, the scope of AT and HM considered included the following types of items:

- Adaptive aids and equipment;
- Specialized medical supplies and equipment;
- Assistive devices;
- ACDs/speech-generating devices;
- Environmental accessibility adaptations (EAA), environmental controls, and HM;
- Lifts;
- Personal emergency response systems (PERS);
- Power custom wheelchairs, scooters, etc.;
- Sip-and-puff controls and other adaptive devices for wheelchairs;
- Vehicle modifications (VM).

Items that are traditionally used for a medical purpose, even if they can also be classified as AT or HM, were excluded. For example, items such as ventilators, respirators, standard wheelchairs, canes, walkers, commodes, specialty mattresses, hearing aids, and prosthetics were generally excluded from this search. These were considered distinct from equipment classified as “specialized medical supplies and equipment” that may enhance a consumer’s ability to perceive or control their environment, such as ACDs or environmental control devices.

The information contained in the state summaries and discussed in Section 4 is based upon Medicaid coverage policies obtained, to the extent possible, via the internet in the form of Medicaid Provider Manuals, HCBS waiver provider manuals, state web sites, and state statutes and regulations. When these secondary sources of information were not readily available, project staff contacted state officials to obtain copies of coverage manuals and/or regulations and to clarify coverage policies and practices. Once compiled, state-level data were validated through telephone and e-mail inquiries to state officials. The data collection process was completed over an eight-month period, from June 2005 through January 2006. Appropriate state officials were identified through an extensive search and direct telephone contact to Medicaid Agency and HCBS waiver personnel. HCBS waivers were selected for inclusion in the state profile if they were listed in the Waiver and Grants Management Database (WGMD) System data files for waiver years 2002-2003<sup>1</sup> as having used waiver funds to pay for AT and/or HM.

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<sup>1</sup> The Centers for Medicare and Medicaid Services (CMS) granted ASPE and Abt Associates access to the WGMD and authorized Medstat to create and deliver to Abt Associates analytic file extracts of the WGMD specifically for

The validation process involved sending an electronic copy of the draft state profile, or summary, to the knowledgeable state staff responsible for State Plan durable medical equipment (DME) or Home Health services, and to the multiple state staff identified as responsible for the various HCBS waivers reported to cover AT and HM. State contacts were asked to review, comment and/or validate the accuracy of the profiles. Profiles were then revised to incorporate state comments/corrections. More than 80 percent of states responded to our requests for data review and verification; however, it is important to note that multiple *individuals* per state were asked to respond to inquiries and to verify Medicaid policies and practices. If just one individual in the state responded, the state was included in this count of respondents.

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HM, VM and AT expenditures. The 2002-2003 data were the most recent data available at the time of information gathering for this Compendium.

## **3. BACKGROUND**

There are important distinctions between equipment and services collectively referred to as AT and those equipment and services encompassed under the rubric of HM. These are described below. In addition, this section presents an overview of relevant regulations, policies and funding sources for AT and HM, organized as follows:

- Federal regulations that support the availability of AT and HM;
- Medicaid policies regarding AT and HM;
- Non-Medicaid funding sources for AT and HM.

### **3.1. Definitions**

AT is a broad term that encompasses any technology to increase, maintain, or improve functional capabilities of individuals with disabilities (Assistive Technology Act of 1998). As such, the use of AT fosters a person's independence, safety, and quality of life. There are many types of AT currently available, ranging from inexpensive items (e.g., grabbers), to expensive high-tech systems (e.g., computerized communication devices). Items as diverse as wheelchairs, power scooters, computer voice recognition software, sip-and-puff controls, prosthetics, and speech synthesis systems are all under the rubric of AT.

HM include any change to a particular location that fosters the independence and safety of individuals with disabilities or that allows people to carry out their daily tasks more easily (Pynoos, *et al.*, 1998). HM can range from installation of inexpensive items (e.g., grab-bars) to more costly structural changes such as widening of doorways, renovation of bathrooms and kitchens, and installation of ramps. HM is often referred to by the more general term "environmental accessibility adaptation". In such cases, the definition expands to include VM that accommodate a wheelchair or allow a person with limited mobility to drive. HM and VM are sometimes considered to be subcategories of AT.

The array of AT and HM has grown dramatically over the past decade; Freedman, Martin, and Schoeni (2004) state that the number of commercially available AT products has grown from 6,000 in 1992 to over 20,000 in 2002. This increase in the number of AT coincides with a demographic shift in the United States, in which the population of elderly and people with disabilities continues to grow. This demographic shift, coupled with the trend toward enabling these people to live at home and be integrated into their communities, has created an expanding need for quality of life-enhancing devices and concomitant surge in states' coverage of these products.<sup>2</sup>

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<sup>2</sup> In 1999, HM, specialized medical equipment or PERS were the most commonly offered services among all HCBS waivers (Lutsky, *et al.*, 2000).

## 3.2. Federal Legislation and Policies Regarding AT and HM

Legislation and federal policy over the last 20 years has strongly supported the rights of people with disabilities to be integrated into their communities. Important laws and court rulings to reduce discrimination and improve access to education, employment, and housing services include:

- Fair Housing Act (1968);
- Architectural Barriers Act (1969);
- Rehabilitation Acts (1973 and 1998 amendments);
- Americans with Disabilities Act (1990);
- Individuals with Disabilities Education Act (IDEA) (1997 and 2004 amendments);
- *Olmstead v. L.C.* Supreme Court Decision (1999);
- New Freedom Initiative (2001).

While all of these laws have important implications for access to AT and HM as a means of enabling people with disabilities to obtain education, employment, and housing, the Assistive Technology Act of 1998<sup>3</sup> (Public Law 105-394) and Assistive Technology Act of 2004 (Public Law 108-364) [known as the Tech Acts] were enacted specifically to improve access to AT devices, and to support state grants for protection and advocacy programs related to AT.

The Tech Acts establish three ways to encourage access to AT and HM:

- State grant programs;
- Federal research and training programs;
- Alternative financing mechanisms for the purchase of AT and HM.

The Federal Government provides grants to states for AT projects to support public awareness programs, promote interagency coordination, provide technical assistance and training, and provide outreach support. In addition, states may provide technology demonstrations, participate in interstate activities, and create public-private partnerships pertaining to AT. All states, territories, and the District of Columbia have Assistive Technology Act grant programs (Freiman, *et al.*, 2006).

Further, the Tech Acts authorize funding for AT and universal design, including federal grants to small businesses, innovative research, grants for commercial groups for research, and grants to improve the training of rehabilitation engineers and technicians. In addition, the Tech Acts direct the President's Committee on the Employment of People with Disabilities to work with the private sector to promote the development of accessible information technologies.

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<sup>3</sup> The Tech Act of 1998 was a reauthorization of the Technology Related Assistance for Individuals with Disabilities Act of 1988 Public Law 100-407 [29 USC 2201].

Finally, the Tech Acts authorize federal grants to states to help pay for the establishment and administration of alternative funding systems for AT to enable more individuals to obtain needed AT and HM. Alternative funding may include low-interest loan funds, interest buy-down programs, revolving loan funds, loan guarantee programs, or programs operated with private entities for the purchase or leasing of AT devices.

The Assistive Technology Act of 2004 retains the structure of the earlier act, but provides additional resources for state AT projects, and emphasizes the needs of two specific populations: students with disabilities receiving transition services and adults with disabilities maintaining or transitioning to community living.

The FY 2007 budget request includes “\$22.4 million for AT programs, of which \$21.3 would support the AT state grant program and \$1.0 million would support technical assistance required under the AT Act’s National Activities. Review of the state plans submitted to the Department under the AT state grant program for fiscal year 2005 found that the majority of states will use their formula grant funds to administer and/or operate alternative financing activities that were initiated with funding from previous fiscal years under Titles I and III of the AT Act.” (U.S. Department of Education, 2006)

The Association of Assistive Technology Act Programs notes that the “AT Act sets the minimum state grant award at \$410,000. Currently, 75 percent of the programs funded under the AT Act are funded below the minimum. Of the 75 percent of the programs receiving less than the minimum, the average state grant program allotment is under \$370,000” (Association of Assistive Technology Act Programs, 2006).

### **3.3. Medicaid Policies Regarding AT and HM**

Medicaid is largely administered by states. As such, it is necessary to examine each state’s regulations separately in order to obtain comparative information (Sheldon and Hager, 1997). Even though Medicaid requires that services be “medically necessary”, each state has flexibility in deciding what does, and does not, fall under this determination (Sheldon and Hager, 1997). Some states may pay for the treatment of a condition but not for a functional need related to the condition; others may consider both types of services as “medically necessary”. Since most AT and HM serve a social or functional need created by an underlying medical condition, states have considerable latitude in defining coverage under their Medicaid programs.

As Sheldon and Hager (1997) state, “The Medicaid law and its implementing regulations do not provide for the funding of any particular AT devices. The law and regulations do not specify whether motorized wheelchairs or ACDs, for example, are covered items within the scope of any particular mandatory or optional category of coverage. Nor do they spell out a specific test of medical necessity...or other criteria governing when a person is eligible for a specific device. However, the federal law



provides a general framework and the individual federal regulations often spell out, in better detail, what a particular category contemplates.” (Sheldon and Hager, 1997). The following sections describe how AT and HM are covered under state plan and HCBS waivers.

### **3.3.1. State Plan Services**

Federal law requires state Medicaid plans to cover a basic set of mandatory services for mandatory eligible populations, which includes items such as physician services, inpatient hospitalizations, nursing facility care, and home health services. Federal law allows states to cover a set of optional services to mandatory eligible populations, which includes services such as intermediate facility care for individuals with mental retardation, personal care services, and targeted case management.

There are no explicit service categories for AT or HM, although specific items may be covered under the mandatory or optional service categories (Sheldon and Hager, 1997). AT, when covered through Medicaid, is most often provided as DME under the mandatory Home Health Services benefit (University of Washington Center for Technology and Disability Studies, 2003). DME is defined by Medicare (Carriers Manual, §2100.1, and Intermediary Manual, §3113.1) as equipment that:

- Can withstand repeated use;
- Is customarily used for a medical purpose;
- Is generally not useful to a person in the absence of an illness or injury;
- Is appropriate for use in the home.

However, each state can adopt its own definition of DME, as well as determine whether a particular item falls under the state’s DME benefit (Golinker, 2005). In addition, each state must include a process for consumers/providers seeking modifications or exceptions to any lists of covered items (University of Washington Center for Technology and Disability Studies, 2003).

In a recent study, Freiman and colleagues found that “...State Medicaid plans vary substantially in their coverage of assistive technologies. Roughly 80 percent of plans cover at least some types of AT for activities of daily living (ADLs) and for personal mobility....Only about 60 percent of state Medicaid plans cover hearing aids, and roughly the same percentage cover some type of augmentative communication AT. None of the state Medicaid plans covers cognitive AT, transportation AT, or HM” (Freiman *et al.*, 2006).

### **3.3.2. Waivers**

In addition to state Medicaid plan services, states have the option to apply for waivers in order to “provide services not usually covered by the Medicaid program, as long as these services are required to keep a person from being institutionalized” (U.S. HHS, 2000). These waivers, commonly referred to as HCBS waivers, are authorized by

Section 1915(c) of the Social Security Act. Section 1915(c) waivers allow states to cover certain supportive services with respect to the frail elderly and/or people with disabilities at risk for institutionalization. Unlike the state plan requirements, 1915(c) allows states to limit the population served under the waiver, the scope of waiver services, and the geographic area in which services are covered.

The HCBS waiver application from CMS includes a list of additional services that states can opt to include in their different waiver programs. If a state chooses to include the service, the state can provide the service as defined in the application or can alter the definition. Table 1 displays the AT and HM waiver service categories listed in the HCBS waiver application.

Recent research funded by the American Association of Retired Persons (AARP) Public Policy Institute examined Medicaid HCBS coverage of AT and HM services and "...found that, among waiver programs for "older persons" and for "older persons and persons with disabilities,"...the one type of AT that is almost always covered is a PERS. HM, the next most frequently listed type of AT, is found in the majority of these waivers. However, no more than half of the waivers cover other AT categories. Very few cover transportation AT, and waiver coverage only applies to the limited number of persons enrolled in the waivers" (Freiman *et al.*, 2006).

Medicaid research and demonstration waivers, authorized by Section 1115 of the Social Security Act, allow states to develop and evaluate policies or programs that have not been widely used. One such program, the Cash and Counseling Demonstration and Evaluation Program, funded jointly by ASPE, the Administration on Aging, and the Robert Wood Johnson Foundation, provides for the purchase of AT and HM, at the consumer's discretion, as part of a personal care services plan (Doty, 1998). A consumer, or his/her surrogate, decides how to spend a monthly cash allowance on needed services such as personal care, AT, and HM.

Multiple studies have reported the growth of 1915(c) waiver programs (Lutzky, *et al.*, 2000; LeBlanc, *et al.*, Miller, *et al.*, 2001). Despite relevant findings about which populations tend to be served and variations in per capita expenditures for different waiver populations, these studies have not explored which waiver populations have access to AT and HM services in particular, what AT and HM services waiver recipients can access, nor how state cost control mechanisms (e.g., caps on spending, requirements that all services be prior authorized) affect AT and HM service receipt among Medicaid-eligible individuals.

<b>TABLE 1. HCBS Waiver AT and HM Service Categories</b>	
<b>Service Type</b>	<b>Core Definition</b>
Home Accessibility Adaptations (also called Environmental Accessibility Adaptations)	Those physical adaptations to the private residence of the participant or the participant's family, required by the participant's service plan, that are necessary to ensure the health, welfare and safety of the participant or that enable the participant to function with greater independence in the home. Such adaptations include the installation of ramps and grab-bars, widening of doorways, modification of bathroom facilities, or the installation of specialized electric and plumbing systems that are necessary to accommodate the medical equipment and supplies that are necessary for the welfare of the participant.
Vehicle Modifications (VM)	Adaptations or alterations to an automobile or van that is the waiver participant's primary means of transportation in order to accommodate the special needs of the participant. Vehicle adaptations are specified by the service plan as necessary to enable the participant to integrate more fully into the community and to ensure the health, welfare and safety of the participant.
Specialized Medical Equipment and Supplies (SMES)	SMES include: (a) devices, controls, or appliances, specified in the plan of care, that enable participants to increase their ability to perform ADLs; (b) devices, controls, or appliances that enable the participant to perceive, control, or communicate with the environment in which they live; (c) items necessary for life support or to address physical conditions along with ancillary supplies and equipment necessary to the proper functioning of such items; (d) such other durable and non-DME not available under the state plan that is necessary to address participant functional limitations; and, (e) necessary medical supplies not available under the state plan.
Assistive Technology (AT)	AT device means an item, piece of equipment, or product system, whether acquired commercially, modified, or customized, that is used to increase, maintain, or improve functional capabilities of participants. AT service means a service that directly assists a participant in the selection, acquisition, or use of an AT device.
Personal Emergency Response System (PERS)	PERS is an electronic device that enables waiver participants to secure help in an emergency. The participant may also wear a portable "help" button to allow for mobility. The system is connected to the participant's phone and programmed to signal a response center once a "help" button is activated.
<b>SOURCES:</b> Application for a §1915(c) Home and Community-Based Waiver [Version 3.3], Instructions, Technical Guide, and Review Criteria, Appendix C. Retrieved January 23, 2006 from <a href="http://www.cms.hhs.gov/MedicaidStWaivProgDemoPGI/05_HCBSWaivers-Section1915(c).asp">http://www.cms.hhs.gov/MedicaidStWaivProgDemoPGI/05_HCBSWaivers-Section1915(c).asp</a> .	

### 3.4. Non-Medicaid Sources for AT and HM

There are several non-Medicaid sources for AT and HM funding, described below.

### **3.4.1. Special Education and Public Schools**

The IDEA authorizes the provision of special education and related services to students with disabilities, in the least restrictive environment possible. Under IDEA, a public school system is required to pay for AT devices and services necessary for a child's educational program, as specified in the child's individualized education plan. AT devices that are commonly used in schools include computer equipment and adaptations, augmentative communication systems, assistive listening devices, and adaptive seating systems (Sheldon and Hager, 1997).

### **3.4.2. State Vocational Rehabilitation Agencies**

The Rehabilitation Act establishes state Vocational Rehabilitation (VR) agencies to provide VR to help people with disabilities to work at their maximum levels, become as self-sufficient and independent as possible, and be integrated into the workplace and community (Sheldon and Hager, 1997). VR agencies cover AT, including VM, under the Rehabilitation Technology Services benefit. In 2002, rehabilitation technology expenditures totaled roughly \$96 million (Freiman, *et al.*, 2006). A state has the option of setting financial criteria to determine eligibility for this benefit.

VR is the payer of last resort and does not pay for any service if a comparable benefit is available through another insurer, provider, or program (including Medicare and Medicaid). Also, VR agencies do not ordinarily serve people aged 65 and over.

### **3.4.3. Medicare**

Medicare is available to all people over age 65, to people receiving Social Security Disability Insurance payments, and to people with end stage renal disease. Medicare Part A provides coverage for limited types of AT under the DME benefit; Part B covers additional types of AT under prosthetic and orthotic devices. For persons with severe disabilities who are dually eligible for both Medicare and Medicaid, Medicare is the primary insurer, with Medicaid as secondary payer of last resort.

Freiman and colleagues (2006) assessed the degree to which Medicare covers and reimburses AT services and found that "...Medicare provides only limited coverage of personal AT for ADLs; items such as grab-bars and raised toilet seats do not meet the criterion of medical necessity. Personal mobility AT such as canes, walkers, and wheelchairs are covered when determined to be medically necessary within the home....And cognitive AT, transportation AT, and HM are not covered at all".

#### **3.4.4. State Assistive Technology Projects**

Each state has an AT program funded through the Tech Acts, as described in Section 3.2. Although exact services available vary by state, most programs include lists of funding resources within the state. State Tech Act projects may be able to assist consumers to access AT and HM services through the following types of resources:

- Grants from private charities, foundations, and civic organizations;
- Low-interest alternative loan programs for the purchase of AT;
- Equipment manufacturer rebates and discounts;
- Personal and home equity loans.

## **4. OVERVIEW OF STATE AT AND HM POLICIES AND PRACTICES**

As described earlier, the purpose of this *Compendium of Home Modification and Assistive Technology Policy and Practice Across the States* is to establish a baseline knowledge of the scope of AT and HM services that states make available to Medicaid-eligible adults. This study provides federal and state policymakers with basic information to inform planning and policy development. It also provides other stakeholders, including consumers, with valuable information about state Medicaid plan and HCBS waiver coverage of AT and HM.

### ***Research questions***

This study was designed to address three fundamental questions:

1. *To what extent Medicaid State Plans and HCBS waivers cover AT and HM services?*
2. *What are the processes available to Medicaid recipients to obtain AT and HM services? For example, must a physician prescribe the equipment or service? Must the recipient be evaluated by a rehabilitation specialist to determine the need for the service? Does the state provide a case manager or service coordinator to assist the recipient to obtain the service?*
3. *What mechanisms -- if any -- do states use to restrict or control use and costs associated with AT and HM services? For instance, must all AT and HM services be prior authorized or approved by the Medicaid State Plan or HCBS waiver prior to delivery? If so, must these services meet "medical necessity" criteria and what are those criteria? Does the state limit or place a "cap" on reimbursement for AT and HM services?*

### ***Methods***

Data summarized here were obtained through internet searches, review of Medicaid provider manuals, limited discussions with state representatives (Medicaid State Plan Home Health/DME and HCBS waiver), and state verification of reported findings. State response rates to our requests for data verification were high (84 percent). However, given the number of different individuals required to review and verify the various HCBS waivers, we rarely received comments from each and every state representative that we contacted.

## Study Limitations

1. *Missing/unverified data.* As described above, some data were not verified by the state, or some aspect of a state's data on AT and HM coverage was not verified. For example, some states were unable to verify their Medicaid State Plan profiles (e.g., Alaska, Mississippi, North Carolina, Pennsylvania, Tennessee, Utah, and Wisconsin). Several states were also unable to verify the AT and HM coverage as described in their HCBS waiver profiles. In these instances, data were considered "missing", as the researchers did not want to presume that unverified data were accurate. These missing data (or unverified data), limit the degree to which this study can address the research questions posed here (e.g., what are all the processes by which consumers access AT and HM services). However, state plan and waiver data are sufficient to present the broad array of AT and HM services offered to Medicaid-eligible individuals nationwide, and to gain a baseline understanding of the various mechanisms states use to control use and costs associated with AT and HM services.
  
2. *Variation in terminology.* One significant challenge (and resulting limitation) of this synthesis of Medicaid State Plan and HCBS waiver coverage policies is the wide variation in terminology for AT and HM. In order to consistently summarize the state and waiver-level data, this report grouped services into the following categories:<sup>4</sup>
  - *Assistive Technology.* Services or equipment or devices considered for our purposes to be "assistive technology" include: specialized medical supplies and equipment, adaptive equipment, adaptive/assistive devices and services, adaptive aids, communication aids, and adaptive eating utensils.
  - *Augmentative communication devices (ACDs).* These speech-generating devices are generally defined as any electric or non-electric aid or device that replaces or enhances lost communication skills for a person with a severe communication disability. They are available in a continuum ranging from very simple systems, such as picture books or picture boards, to highly complex computerized systems.
  - *Environmental accessibility adaptations/Home Modifications.* Services or equipment that were categorized as "environmental accessibility adaptations" or HM include: physical adaptations to the home and/or workplace, wheelchair ramps, environmental control systems, plumbing modifications, turnaround space adaptations, specialized accessibility adaptations, environmental modifications, and the installation of specialized electrical and/or plumbing systems necessary to accommodate medical equipment and supplies.

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<sup>4</sup> These categories were adopted in part from the CMS HCBS waiver application (see [http://www.cms.hhs.gov/MedicaidStWaivProgDemoPGI/05\\_HCBSWaivers-Section1915\(c\).asp](http://www.cms.hhs.gov/MedicaidStWaivProgDemoPGI/05_HCBSWaivers-Section1915(c).asp)).

- *Personal Emergency Response System.* A PERS is generally an electronic device that enables a person to secure help in an emergency. Though PERS systems are a form of AT (as are ACDs and power wheelchairs), these services were categorized in a group by themselves in order to distinguish those states/waivers that offer only PERS from those that offer PERS and other AT.
- *Vehicle modifications.* Though VM (e.g., van lifts, modifications to the primary vehicle) were often contained within a waiver’s HM service definition, this report categorizes these services separately as “vehicle modifications”.
- *Wheelchairs.* The mobility-enhancing devices included in this study are power-operated wheelchairs, custom wheelchairs, custom wheelchair seating, power-operated vehicles, scooters, adaptive devices for wheelchairs, and sip-and-puff wheelchair controls.

Study findings are summarized below by Medicaid State Plan and 1915(c) HCBS waiver program, respectively, due to the differences in programmatic structure and requirements between each type of Medicaid program.

#### **4.1. Medicaid State Plan Coverage of AT and HM**

As stated earlier, Medicaid State Plans must offer “mandatory” benefits and may offer “optional” benefits. The benefit categories that states are most likely to use to cover AT are the “medical equipment and supplies” or “durable medical equipment” categories within the mandatory home health benefit. Forty-seven states and the District of Columbia categorize any AT or mobility-enhancing services (e.g., power wheelchairs, sip-and-puff wheelchair controls) as DME, while three states classify these services under the “prosthetic devices” benefit (Arkansas, Colorado and Iowa).<sup>5</sup>

##### **4.1.1. AT and HM Services Listed as Medicaid State Plan Services**

As presented in Table 2, most states cover ACD or speech-generating devices under the Medicaid State Plan, though these services are not referred to in states’ coverage guidelines as “assistive technology”. All 40 states for which wheelchair coverage information was located offer Medicaid coverage for the purchase or rental of mobility-enhancing equipment or services. Examples of these services include power-operated wheelchairs, custom wheelchairs, custom wheelchair seating, power-operated vehicles, scooters, adaptive devices for wheelchairs, and sip-and-puff wheelchair controls. Only three states (Arizona, Kansas, and Massachusetts) and the District of Columbia list PERS as a covered Medicaid State Plan service; two of these are 1115 Research and Demonstration Waiver states (Arizona and Massachusetts). As stated

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<sup>5</sup> Note that most state plans do not refer to *any* services as “assistive technology”; this is a categorization imposed by the project team for purposes of classifying Medicaid coverage policies.



earlier, PERS is generally “any electronic device that enables a person to secure help in an emergency”. With the exception of Arizona, no states offer HM services, *per se*, as Medicaid State Plan services, though Hawaii covers wheelchair ramps and New Jersey reportedly will cover “environmental control units” in special circumstances. These data differ slightly by those reported by Freiman *et al.*, 2006, in which no Medicaid State Plans were reported to cover HM.

Medicaid State Plans also provide coverage under the Home Health DME benefit for other types of mobility-enhancing equipment and supplies, or for AT. These types of equipment and services are categorized as “other” in Table 2. Examples of these services include:

- Specialized rehab equipment, AT, mobility-enhancing equipment including grab-bars and handrails, automobile hand controls (Arkansas);
- Bathtub wall rail, bathtub rail, floor base, toilet rail, transfer tub rail attachment, power-operated vehicle; environmental control units permitted in special circumstances (New Jersey);
- AT that is limited to use in the home with a documented medical need for the device (Texas);
- AT/adaptive equipment including lifts, bath chairs, wall-mounted insulin delivery devices, and automatic feeder systems (Virginia).

TABLE 2. Medicaid State Plan Coverage: AT, Wheelchairs and Other				
State	PERS	ACD	Wheelchairs	Other
Alabama		✓	M	
Alaska	M	M	M	
Arizona	✓	✓	M	✓
Arkansas		✓	✓	✓
California		✓	M	✓
Colorado		✓	✓	✓
Connecticut			✓	✓
Delaware		✓	✓	
District of Columbia	✓		M	✓
Florida		✓	✓	
Georgia		✓	✓	
Hawaii		✓	✓	✓
Idaho		✓	M	✓
Illinois		✓	✓	
Indiana		✓	✓	
Iowa		✓	M	✓
Kansas	✓	✓	M	✓
Kentucky		✓	M	✓
Louisiana			✓	✓
Maine		✓	✓	✓
Maryland		✓	✓	✓
Massachusetts	✓	✓	✓	✓
Michigan		✓	✓	✓
Minnesota		✓	✓	✓
Mississippi			✓	✓

<b>TABLE 2 (continued)</b>				
<b>State</b>	<b>PERS</b>	<b>ACD</b>	<b>Wheelchairs</b>	<b>Other</b>
Missouri		✓	✓	
Montana			✓	✓
Nebraska		✓	✓	✓
Nevada			✓	
New Hampshire		✓	✓	✓
New Jersey		✓	✓	✓
New Mexico		✓	✓	✓
New York		✓	M	✓
North Carolina			✓	✓
North Dakota		✓	✓	✓
Ohio		✓	✓	✓
Oklahoma			✓	✓
Oregon		✓	✓	✓
Pennsylvania		✓	✓	
Rhode Island			M	✓
South Carolina		✓	✓	✓
South Dakota		✓	✓	✓
Tennessee			✓	M
Texas		✓	✓	✓
Utah			✓	
Vermont		✓	✓	✓
Virginia		✓	✓	✓
Washington		✓	✓	✓
West Virginia		✓	✓	✓
Wisconsin			✓	✓
Wyoming			✓	✓
<b>Total States Offering Services</b>	<b>4</b>	<b>37</b>	<b>40</b>	<b>39</b>
<b>NOTES:</b> n = 51 (50 states and Washington, DC). "M" indicates missing data.				
<b>SOURCE:</b> Abt Associates review of Medicaid State Plan coverage policies, June 2005-February 2006.				

#### **4.1.2. How Medicaid Recipients Access AT and HM Services**

In addition to reviewing the types of AT (and/or HM) services covered by Medicaid State Plans, this study considered the process by which Medicaid-eligible individuals access these particular state plan services. Physician orders are a requirement for AT coverage in the majority of state plans.<sup>6</sup> In addition, more than half of all Medicaid State Plans (29) require assessments by health professionals (other than a physician) in order to document the need for the service. This is especially true in the case of augmentative speech devices, in which a speech-language pathologist/therapist often assesses the recipient's need for the device in order to obtain coverage for that service, and in the case of wheelchairs, in which a physical or occupational therapist assesses the recipient. Table 3 displays the number of states with specific requirements regarding how Medicaid recipients might access AT and HM services. A list of all state plan access requirements may be found in Appendix 1.

<sup>6</sup> Federal guidelines require that Medicaid home health services be ordered by a physician.

<b>TABLE 3. Medicaid State Plan Access to AT and HM Services and Service Controls</b>		
<b>Access Mechanisms</b>	<b>States with Requirement</b>	<b>States without the Requirement</b>
Service Coordination/Case Manager (n=36)	11	25
Physician Order (n=37)	37	0
Assessment by Other Health Professional (n=33)	29	4
Medical Necessity (n=48)	47	1
Prior Authorization (n=42)	42	0
One or more vendor/supplier bids (n=37)	1	36
<b>NOTE:</b> n varies due to varying response rates from states and adequacy of secondary data.		
<b>SOURCE:</b> Abt Associates review of Medicaid State Plan coverage policies, June 2005-February 2006.		

#### **4.1.3. Limits on Access to AT and HM Services for Medicaid State Plan Recipients**

Medicaid State Plans limit use and contain costs related to AT and/or HM services by reviewing whether the services are “medical necessary”, require “prior authorization”, or sometimes require consumers or providers to obtain one or more “bids” from potential suppliers before the State would agree to cover the equipment or service. A brief description of these mechanisms follows, along with a summary of findings regarding the number of states that utilize these controls (presented in Table 3).

- *Medical necessity.* “For federally mandated services (e.g., home health), states may...make service eligibility criteria based upon medical necessity....” (U.S. HHS, 2000), though states may develop and implement their own definitions of “medical necessity” when determining whether to cover a particular service, device or equipment. Issues that may be relevant to determining medical necessity may be whether the service is related to the medical condition for which the recipient is receiving treatment, or whether the service is consistent with “generally accepted standards of good medical practice” (U.S. HHS, 2000).
- *Prior authorization.* Prior authorization is commonly used in managed care environments and requires the provider of service to submit medical justification or rationale for the services, along with an estimate of how much service will be required. In such a system, claims for service are generally not reimbursed without proof of prior authorization. There is a general interpretation that “medical necessity” criteria or limitations *require* that services be preauthorized, or authorized “...by a medical professional before the service begins”. (U.S. HHS, 2000).
- *Bids for equipment or services.* Some programs require that either the consumer or vendor submit cost estimates or “bids” before equipment or services may be obtained or authorized. This process assures that the payor -- in this case the state Medicaid agency -- pays for only the least costly services available.

The following sections describe findings regarding the number of states that use these controls.

**Medical necessity.** Forty-seven of 48 states require that AT services meet medical necessity criteria.<sup>7</sup> The majority of state plan coverage guidelines merely state that “medical necessity is required”, or that “the service must be medically necessary”. Examples of more specific language used by states regarding medical necessity of AT services include:

- “The...definition of medical necessity limits health care services to those necessary to protect life, to prevent significant illness or significant disability, or to alleviate severe pain. Therefore, prescribed DME items may be covered as medically necessary only to preserve bodily functions essential to ADLs or to prevent significant physical disability” (California -- MediCal).
- “Medical necessity must be established for each service and documented. DME/medical supplies, orthotics, and prosthetic devices must be:
  - Functionally appropriate,
  - Adequate for the intended medical purpose,
  - For conventional use, and
  - For the exclusive use of the recipient” (Florida).
- “A certificate of medical necessity is required for some specific items; the physician must determine medical necessity” (Wyoming).

**Prior authorization.** Forty-two state plans require prior authorization for AT equipment or services. The scope of this review did not include an investigation of the process by or frequency with which services are authorized, nor did it include analysis of data regarding the volume of AT services authorized or denied through states’ prior authorization programs.

**Bids for equipment or services.** Most state plans do not require the provider or recipient to obtain vendor/supplier bids for the service, and more than half (29) do not impose special reimbursement limits on these Medicaid State Plan services (they generally reimburse for these services according to the Medicare DME schedule).

## 4.2. HCBS Waiver Coverage of AT and HM

Using the WGMD file extracts, CMS internet information on HCBS waivers, and interviews with HCBS waiver representatives, 202 HCBS waivers were identified in the 50 states and the District of Columbia that reportedly cover AT and/or HM. The number

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<sup>7</sup> Arizona’s coverage guidelines do not contain the phrase “medical necessity”. Though no explanation was obtained for this from the state, it may be that Arizona utilizes service criteria other than medical necessity to limit utilization, since Arizona’s Medicaid State Plan services are capitated and operate under an 1115 Research and Demonstration waiver.

of waivers per state that were reported to cover these services ranged from one (Arizona, an 1115 Research and Demonstration Waiver state) to ten (Pennsylvania).

Table 4 shows states' coverage of AT and HM by waiver type. Consistent with previous reviews of 1915(c) HCBS waivers (Lutsky, et al., 2000), most states had one or more "Aged and Disabled" waivers, and one or more "Mentally Retarded/Developmentally Delayed" waivers. Twenty-one states studied offered a Traumatic Brain Injury (TBI) waiver and seven offered HIV/AIDS waivers.

<b>TABLE 4. Coverage of Assistive Technology and Home Modification by Waiver Type</b>	
<b>Waiver Type</b>	<b>Number of States* (n=51)</b>
Aged and Disabled	49
Mentally Retarded/Developmentally Disabled (MR/DD)	46
Traumatic Brain Injury (TBI)	21
HIV/AIDS	7
Other**	5
<p><b>NOTES:</b> * Some states have more than one waiver of each type.            ** The other waiver types found to cover AT and/or HM include a chronically ill waiver, a technology dependent waiver, New Jersey's 1115 Personal Preference Program waiver, and Vermont's two 1115 waivers.</p> <p><b>SOURCE:</b> Abt Associates review of Medicaid HCBS waiver coverage policies, June 2005-February 2006.</p>	

#### **4.2.1. AT and HM Services Listed as HCBS Waiver Services**

Table 5 provides a summary of waiver types across all states and the District of Columbia according to whether PERS, AT, HM and VM services are covered in those waiver types. These data suggest that AT and HM are broadly covered across the Aged and Disabled and MR/DD waivers, but that VM are most often offered only to Medicaid recipients served by the MR/DD waivers. Of the 173 waivers studied that offer HM (the most frequently offered of the four services), 159 cover AT, 124 cover PERS, and 64 of the waivers reportedly cover VM.

More than half of the state HCBS waivers cover AT under the term "specialized medical equipment and supplies". Examples of services that fall under this category across the states and across different waiver types include:

- Van lifts/adaptations for vehicles (Maine);
- Specialized wheelchairs and wheelchair modifications (Michigan);
- Ramps, grab-bars, porch lifts, electronic door openers, ACDs, and sip-and-puff controls for wheelchairs (Montana);
- Vehicle adaptations and AT (Nevada);
- Widening of doorways and modification of bathroom facilities (Washington).

<b>Waiver Type</b>	<b>PERS Covered</b>	<b>AT Covered</b>	<b>HM Covered</b>	<b>VM Covered</b>
Aged and Disabled (n=90)	65	59	72	16
Mentally Retarded/ Developmentally Disabled (MR/DD) (n=79)	40	71	72	37
Traumatic Brain Injury (TBI) (n=21)	14	20	20	8
HIV/AIDS (n=7)	2	6	5	1
Other (n=5)	3	3	4	2
<b>Total (n=202)</b>	<b>124</b>	<b>159</b>	<b>173</b>	<b>64</b>
<b>SOURCE:</b> Abt Associates review of Medicaid HCBS waiver coverage policies, June 2005-February 2006.				

Some of these same services are categorized as “environmental accessibility adaptations” or as HM by other states and waivers. For example, the State of Washington considers the installation of ramps and grab-bars and the widening of doorways to be EAA in the “Basic” MR/DD waiver, while grouping those services under SMES in the “Community Options Program Entry System” Aged and Disabled waiver. Other examples of EAA services across the states and different waiver types include:

- Ramps, grab-bars, minor home improvements (California);
- Alarm systems/alert systems including auditory, vibratory, and visual; stair mobility devices; shatterproof windows (Delaware);
- Visual fire alarms; lifts; ramps; grab-bars or handrails; stair glides; widening of doorways; modification of bathroom or kitchen facilities to make them physically accessible; lock, buzzer, or other device on a doorway to prevent or stop wandering (Maryland).

#### **4.2.2. How HCBS Waiver Recipients Access AT and HM Services**

Appendix 1 summarizes the process by which waiver recipients access AT and HM services for all 202 waivers examined in this study. In all states for which we have complete data -- with the exception of Tennessee -- waiver policies require that recipients be assessed by a health professional such as a physical or occupational therapist in order to determine the need for at least one AT or HM service or supply. Tennessee does not require such an assessment in the state’s three Aged and Disabled waivers, but does require a health professional assessment in its MR/DD waivers. Without exception, all states and the District of Columbia offer a case manager or other service coordinator to assist recipients with accessing waiver services and/or assessing the recipient’s need for the services. Few states seem to require a physician’s order as a condition of coverage of the AT/HM service. However, these data should be interpreted with caution, as information about the need for physician orders was unable to be obtained in more than half of the waivers studied. HCBS waiver manuals were often silent regarding this coverage requirement.

### **4.2.3. Limits on Access to AT and HM Services for HCBS Waiver Recipients**

Like Medicaid State Plans, HCBS waivers may limit use and contain costs related to AT and/or HM services by reviewing whether the services are “medical necessary”, may require “prior authorization”, and sometimes require consumers or providers to obtain one or more “bids” from potential suppliers before the waiver would agree to cover the equipment or service. A brief summary of findings regarding HCBS waiver limits to coverage and/or cost containment mechanisms follows.

**Medical necessity.** Unlike the Medicaid State Plans, in which the majority use “medical necessity” criteria to determine coverage of AT and HM services, only about half of the HCBS waivers studied report “medical necessity” as a requirement for coverage, while 28 waivers did not require “medical necessity”.<sup>8</sup> There were 75 of the 202 waivers in which information about medical necessity requirements was unable to be verified with state personnel, or data were missing from the coverage manuals. The specification of the requirement varied across state waiver programs, and within state waiver programs. For example, Connecticut does not use “medical necessity” criteria in any of the four HCBS waivers studied, while Florida does not use the criteria in one of three of its waivers.

To further our understanding of state policy and practice in the area of medical necessity requirements, we examined some of the terms that state waiver programs use when describing what AT or HM service might be covered. Some states use terms that are more “functionally” oriented than “medically” oriented when describing requirements for AT and/or HM coverage. For example,

- In the Connecticut *Home Care Program for Elders* waiver, “the [home] modifications must be necessary because of a physical disability”.
- In the Connecticut *Comprehensive Supports* waiver, HM and VM “must be necessary to improve the individual’s independence and inclusion in the community and to avoid institutionalization”.
- The Florida *Channeling Services for Frail Elderly* waiver states that, “physical adaptations to the home [must] ensure the health [and] welfare of the individual”.
- In Hawaii’s *Nursing Home without Walls* waiver, EAA or HM must “...be necessary to ensure the health, welfare, and safety of the individual, or must enable the individual to function with greater independence in the home, and without which, the individual would require institutionalization”.

**Prior authorization.** As with the Medicaid State Plans, almost all HCBS waivers studied require that at least one AT and HM service be prior authorized. The scope of this review did not include an investigation of the process by or frequency with which

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<sup>8</sup> It was assumed that the state did not have a requirement for medical necessity (or other coverage limits) if the HCBS waiver coverage manual was silent with regard to medical necessity.

services are authorized or denied through the HCBS waiver prior authorization programs.

***Bids for equipment or services.*** About half of the HCBS waiver programs require the provider or recipient to obtain vendor/supplier bids for the service.

***Limits on AT and HM services.*** Many of the HCBS waivers described cost caps or limits to the amount the state would reimburse for AT and HM services. Many states set an annual or lifetime limit on the amount that could be spent on HM and AT, while others set a “total waiver cap” per recipient per year or per the life-of-the-waiver. Some of the state representatives stated that they calculated an average cost per person, and that services must be managed within that average cost (e.g., Montana). Similarly, Connecticut’s *Home Care Program for Elders* monthly cost cap determines whether funds are available for HM. Some states also reported that they at times had the flexibility within the waiver to shift funds toward clients who were needier.

Table 6 presents the mechanisms that states use to limit reimbursement for AT and HM services in any of their waivers. Note that depending on the waiver type, the same state may have differently-defined service limits. For example, Iowa has a mix of annual expenditure limits for HM and lifetime benefit limits for HM, depending on the waiver. Some specific examples of state waiver limits are as follows:

- *States with a lifetime limit or a life-of-the-waiver limit on AT and/or HM expenditures:*
  - Arkansas -- \$7,500 per person limit for the life-of-the-waiver for HM,
  - Georgia -- \$10,000 per person lifetime limit for HM,
  - Iowa -- \$1,000 lifetime limit for HM (Elderly Waiver),
  - Iowa -- \$5,000 lifetime benefit limit for HM (Mental Retardation Waiver),
  - Kansas -- \$7,500 lifetime benefit for AT, HM and VM.
  
- *States with an annual limit on AT and/or HM expenditures:*
  - Alabama -- \$5,000 per year for SMES, \$5,000 per year for HM,
  - Iowa -- \$6,000 per year limit for HM,
  - New Mexico -- \$300 per year limit for HM “maintenance”,
  - North Carolina -- \$10,000 per year limit for ACDs,
  - Virginia -- \$5,000 per year for AT.
  
- *States with a waiver limit over multiple years on AT and/or HM expenditures:*
  - Alaska -- \$10,000 every three-years for HM,
  - Florida -- \$20,000 over five years for EAA,
  - Illinois -- \$15,000 over five years for all HM, VM, and adaptive equipment,
  - Oklahoma -- two residences in five-year period (HM); one vehicle in five-year period (VM).



- States that report a total waiver cap, inclusive of AT, HM and other waiver services:
  - Montana -- Must fit into annual [waiver] budget for all beneficiaries,
  - Tennessee -- Total budget for all waiver services cannot exceed \$36,000 per year (including Emergency Assistance services).

<b>TABLE 6. Types of Waiver Limits for AT and HM Services Used within States</b>				
<b>State</b>	<b>Lifetime or life of waiver limit</b>	<b>Annual service cap or limit</b>	<b>Limit over multiple years</b>	<b>Total waiver cap</b>
Alabama	✓	✓		
Alaska			✓	
Arizona	✓			
Arkansas	✓	✓		
California	✓	✓		
Colorado	✓			
Connecticut			✓	
Delaware	✓	✓		
District of Columbia	M	M	M	M
Florida		✓	✓	
Georgia	✓	✓		
Hawaii				
Idaho	M	M	M	M
Illinois		✓	✓	
Indiana	✓	✓		
Iowa	✓	✓		
Kansas	✓			
Kentucky		✓		
Louisiana	✓			
Maine		✓	✓	
Maryland		✓		
Massachusetts*				
Michigan*				
Minnesota		✓		
Mississippi	M	M	M	M
Missouri		✓	✓	
Montana		✓		✓
Nebraska		✓		
Nevada		✓		
New Hampshire	✓			
New Jersey		✓		
New Mexico	✓	✓		
New York		✓		
North Carolina	✓	✓		
North Dakota	M	M	M	M
Ohio*			✓	
Oklahoma		✓	✓	
Oregon		✓		
Pennsylvania*	✓	✓		
Rhode Island				
South Carolina	✓	✓		
South Dakota*				

TABLE 6 (continued)				
State	Lifetime or life-of-waiver limit	Annual service cap or limit	Limit over multiple years	Total waiver cap
Tennessee*	✓	✓	✓	✓
Texas	✓	✓		
Utah*				
Vermont	✓	✓		
Virginia		✓		
Washington*		✓		
West Virginia		✓		
Wisconsin	M	M	M	M
Wyoming				

**NOTES:** \* These states have limits other than those reflected here (e.g., Massachusetts caps reimbursement at the average per person expenditure in the previous year; South Dakota imposes monthly caps; Utah has total reimbursement limits per service). "M" indicates missing data.

**SOURCE:** Abt Associates review of Medicaid HCBS waiver coverage policies, June 2005-February 2006.

### 4.3. Discussion

#### ***The extent to which AT and HM services are offered by Medicaid State Plans and HCBS waivers.***

There is coverage of AT and HM services in the waiver programs, and more limited coverage of AT in the state plans. There is wide variation in definitions and terminology used by states when referencing AT and HM services. Specifically,

- AT services covered most frequently by Medicaid State Plans include ACDs and power or custom wheelchairs or wheelchair adaptations.
- Almost no Medicaid State Plan reports coverage of HM, PERS, or VM.
- 173 of the 202 waivers reviewed offer HM, 159 cover AT, 124 cover PERS, and 64 of the waivers reportedly cover VM, mostly through the MR/DD waivers.
- Though all states offer HCBS waivers that reportedly cover AT and/or HM, considerable variation exists in how states define and refer to AT and HM services.
- Both Medicaid State Plans and HCBS waivers describe coverage of AT services in their provider manuals. However, state plans almost never refer to these services as “assistive technology”.

#### ***The processes available to Medicaid recipients to obtain AT and HM services.***

Most HCBS waivers -- and some state plans (11) -- offer service coordination or case management to recipients in order to facilitate access to AT and HM services, and both types of Medicaid programs use health professionals such as physical and occupational therapists and speech-language pathologists or therapists to assess recipient need for AT or HM services. The majority of state plans require physician orders for AT and HM services, while only half of the waiver programs list that as a requirement.

***The mechanisms used by states to control use and costs associated with AT and HM services.***

Most state HCBS waivers list many AT and HM services as available to multiple target populations in need of these services (e.g., Aged and Disabled, MR/DD, TBI). However, the scope of this study did not include how and to what degree access to services might be limited through prior authorization procedures and medical necessity or other criteria.

Almost all Medicaid State Plans use “medical necessity” criteria when determining coverage for AT and HM services, and half of the HCBS waivers studied use these criteria. For those waiver programs that do not use “medical necessity” criteria (n=28), some use “functional” language to determine if AT or HM services should be covered, rather than “medical” language or “medical necessity” criteria. This functional approach to coverage determination may be more aligned with the intent of the 1915(c) waivers to maintain the independence of the elderly and persons with disabilities in the community.

Almost all Medicaid State Plans and HCBS waivers studied require prior authorization of some sort for AT and HM services.

State HCBS waiver programs use multiple mechanisms to limit or restrict waiver expenditures, whereas Medicaid State Plans have few limits (but less extensive AT/HM coverage).

## **5. STATE PROFILES OF AT AND HM POLICIES AND PRACTICES**

Profiles of each state's Medicaid policies and practices with regard to AT and HM were developed based upon the review and synthesis of Medicaid coverage policies obtained, to the extent possible, via the internet in the form of Medicaid Provider Manuals, HCBS waiver provider manuals, state web sites, and state statutes and regulations. Profiles are included for all states and for the District of Columbia (see Volume II of this report). The first page of each profile starts with an overview of the state's Medicaid coverage for AT and HM and then describes the state plan coverage in detail. The following pages describe AT and HM policies and practices as implemented in the state's HCBS waivers, with each waiver on a separate page. The profiles are arranged alphabetically, by state. Exhibit 1 illustrates a state profile and explains each field.

## Exhibit 1: Description of the State Profile

<b>Overview</b>	A brief description of AT and HM services offered by the Medicaid State Plan and the state's relevant HCBS waivers. <sup>9</sup> (This section appears only on the first page of the profile.)					
<b>Program Name</b>						
<b>Agency Name</b>	Agency that administers the program.					
<b>Phone</b>	Phone number for general information.					
<b>Web site</b>	Web site for general information.					
<b>Summary of State Plan Coverage</b>	For the state plan, this section describes AT and HM services that are available and the benefit categories under which these services are covered. For the HCBS waivers, this section summarizes the waiver's services.					
<b>Populations Served</b>	Individuals who qualify for services. The phrase "Medicaid-eligible individuals" refers to the populations served by the Medicaid State Plan, as this study did not collect data on each state's criteria for Medicaid eligibility.					
<b>Terminology for HM and AT</b>	Terminology that is used in the state's Medicaid regulations and/or provider manuals to refer to covered types of AT and HM.					
<b>Examples of Covered HM and AT Services</b>	Examples of items that are covered, within the different types of AT and HM.					
<b>Process to Access Benefit</b>	<i>Service Coordination/Case Manager</i>	<i>MD Order Required</i>	<i>Assessment by Other Health Professional</i>	<i>Medical Necessity Required</i>	<i>PA Required</i>	<i>Bids Required</i>
	√	√	√	√	√	√
	<p>In these fields, the symbol √ is used to indicate that the program requires this process in order for the recipient to receive the service; a blank indicates that the process or procedure is not required in order to obtain services; and N/A indicates that the data was not available or not verified by the state. Note that √ in a box indicates that at least one type but not necessarily all types of AT/HM meet the criteria for inclusion. The data fields are defined as follows:</p> <p><b>Service Coordination/Case Manager.</b> A person, such as a case manager, assesses a client's overall health care needs, may design a service plan, and coordinates services.</p> <p><b>MD Order Required.</b> A physician or other licensed medical provider (e.g., physician's assistant, nurse practitioner) must write a prescription or order for an AT/HM service.</p> <p><b>Assessment by other health professional.</b> A specialized therapist (such as a physical, occupational or speech-language) must perform an assessment before an item can be covered.</p> <p><b>Medical Necessity Required.</b> The state's Medicaid regulations state that the AT/HM service must be medically necessary in order to be covered.</p> <p><b>PA (Prior Authorization) Required.</b> An AT/HM service must receive prior authorization from the program in order to be covered.</p> <p><b>Bids Required.</b> A case manager, service coordinator or consumer must obtain one or more bids from an equipment supplier/vendor for an AT/HM service.</p>					
<b>Benefit Limits</b>	Cost caps or service limits that the program imposes.					
<b>Training on Use and Repairs</b>	The availability of training on the use of AT/HM*. Coverage for repair of AT/HM*.					
<p><b>NOTE:</b> * When coding these services, we indicated that these services were covered if they were bundled with the equipment cost (and were not a separate charge.) We also included training and repairs that were billed separately.</p> <p><b>SOURCE:</b> Abt Associates review of Medicaid State Plan and HCBS waiver coverage policies, June 2005-February 2006.</p>						

<sup>9</sup> This investigation of waiver coverage policies was limited to those waivers identified by the WGMD file extracts obtained for the project from Medstat that reportedly offer AT and/or HM services.

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# APPENDIX 1. PROCESS TO ACCESS WAIVER SERVICES

Access to Services -- HCBS Waiver Requirements						
State	Waiver Category	Waiver Name	MD Order	Support Coordination/ Case Manager	Prior Approval	Medical Necessity
AL	MR WAIVER	Home & Community-Based Waiver for Persons with Mental Retardation	√	√	√	√
AL	MR WAIVER	Home & Community-Based Living at Home Waiver for the Mentally Retarded		√	M	√
AL	PHYSICAL DISABILITIES WAIVER	Home & Community-Based Services for Individuals Under the Technology Assisted Waiver for Adults	√	√	√	√
AL	PHYSICAL DISABILITIES WAIVER	Alabama Independent Living Waiver	√	√	√	√
AK	AGED AND/OR DISABLED	Older Alaskans	M	√	√	√
AK	MR/DD WAIVER	People with Mental Retardation & Developmental Disabilities	M	√	√	√
AK	PHYSICAL DISABILITIES WAIVER	Adults with Physical Disabilities	M	√	√	√
AZ	AGED AND/OR DISABLED	Arizona Health Care Cost Containment System	√	√	√	
AR	PHYSICAL DISABILITIES WAIVER	Alternatives for Adults with Physical Disabilities	M	√	√	√
AR	MR/DD WAIVER	Alternative Community Service	√	√	√	√
CA	AGED AND/OR DISABLED	In-Home Medical Care Waiver	M	√	√	√
CA	AGED AND/OR DISABLED	Nursing Home Facility A/B Waiver	M	√	√	√
CA	AGED AND/OR DISABLED	Nursing Facility Subacute Waiver	M	√	√	√
CA	AGED AND/OR DISABLED	Multipurpose Senior Service Program	M	√	√	M
CA	MR AND/OR DD	Home & Community-Based Services Waiver for Persons with Developmental Disabilities	M	√	√	M
CA	HIV/AIDS WAIVER	AIDS Waiver	√	√	√	√
CA	AGED AND/OR DISABLED	Assisted Living Waiver	M	√	√	M
CO	AGED AND DISABLED WAIVER	Home & Community-Based Services for the Elderly, Blind, & Disabled	M	√	√	√
CO	MR/DD WAIVER	Home & Community-Based Services for Persons with Major Mental Illness	M	√	√	√
CO	MR/DD WAIVER	Home & Community-Based Services for the Developmentally Disabled	√	√		

<b>Access to Services -- HCBS Waiver Requirements</b>						
<b>State</b>	<b>Waiver Category</b>	<b>Waiver Name</b>	<b>MD Order</b>	<b>Support Coordination/ Case Manager</b>	<b>Prior Approval</b>	<b>Medical Necessity</b>
CO	TBI WAIVER	Home & Community-Based Services for Persons with Brain Injury	M	√	√	√
CO	DD WAIVER	Supported Living Services	M	√	√	√
CT	AGED AND/OR DISABLED	Connecticut Home Care Program for Elders	√	√	√	
CT	MR AND/OR DD	Comprehensive Supports Waiver		√	√	
CT	TBI WAIVER	Acquired Brain Injury		√	√	
CT	MR AND/OR DD	Individual & Family Support Independence Plus		√	√	
DE	MR AND/OR DD	Mental Retardation/Developmental Disability Home & Community-Based Waiver	√	√	√	
DE	AGED AND/OR DISABLED	Elderly & Disabled Home & Community-Based Waiver	M	√	√	M
DC	MR AND/OR DD	Mental Retardation & Developmental Disabilities Waiver	√	M	M	M
DC	AGED AND/OR DISABLED	Elderly & Physical Disabilities Waiver	M	M	M	√
DC	HIV/AIDS WAIVER	HIV/AIDS Waiver	M	M	M	M
FL	MR AND/OR DD	Developmental Services Home & Community-Based Services Waiver	M	√	√	√
FL	AGED AND/OR DISABLED	Channeling Services for Frail Elderly	M	√	M	M
FL	AGED AND/OR DISABLED	Elderly & Disabled Waiver	M	√	M	M
FL	HIV/AIDS WAIVER	Project Aids Care	M	√	√	√
FL	AGED AND/OR DISABLED	Nursing Home Diversion	M	√	√	
FL	MR AND/OR DD	Family & Supported Living Waiver	M	√	√	√
FL	TBI	Home & Community-Based Services Waiver for Traumatic Brain Injury & Spinal Cord Injuries	M	√	√	√
FL	AGED AND/OR DISABLED	Adult Cystic Fibrosis Waiver	M	√	√	√
FL	AGED AND/OR DISABLED	1915(c) Alzheimer's Disease Program	M	√	M	M
GA	MR/DD WAIVER	Mental Retardation Waiver Program	√	M	√	M
GA	MR/DD WAIVER	Community Habilitation & Support Services	M	√	√	√
GA	PHYSICAL DISABILITIES WAIVER	Independent Care Waiver Program	M	√	√	M
HI	MR AND/OR DD	Developmentally Disabled/ Mentally Retarded	M	√	√	
HI	AGED AND/OR DISABLED	Nursing Home Without Walls	M	√	√	
HI	HIV/AIDS WAIVER	HIV Community Care Program	M	√	√	M

Access to Services -- HCBS Waiver Requirements						
State	Waiver Category	Waiver Name	MD Order	Support Coordination/ Case Manager	Prior Approval	Medical Necessity
ID	AGED AND DISABLED WAIVER	Aged & Disabled Waiver	M	√	√	
ID	MR/DD WAIVER	Developmentally Disabled Waiver	M	√	√	√
ID	TBI WAIVER	Traumatic Brain Injury Waiver	M	√	√	√
IL	TBI	Waiver for Persons with Brain Injury	M	√	√	M
IL	AGED AND/OR DISABLED	Supportive Living Waiver	M	M	M	M
IL	AGED AND/OR DISABLED	Elderly Waiver	M	√	√	M
IL	HIV/AIDS WAIVER	Home & Community-Based Services Waiver for Persons Diagnosed with HIV/AIDS	M	√	√	M
IL	AGED AND/OR DISABLED	Home & Community-Based Services Waiver for Persons with Physical Disabilities	M	√	√	M
IL	MR AND/OR DD	Home & Community-Based Services Waiver for Adults with Developmental Disabilities	M	√	√	M
IN	AGED AND/OR DISABLED	Aged & Disabled Waiver	M	√	√	M
IN	TBI WAIVER	Waiver for Persons with Traumatic Brain Injury	M	√	√	M
IN	MR AND/OR DD	Waiver for Persons with Developmental Disabilities	M	√	√	M
IN	MR AND/OR DD	Support Services for Mentally Retarded/Developmentally Disabled	M	√	√	M
IN	MR AND/OR DD	Autism Waiver	M	√	√	M
IA	MR AND/OR DD	Mental Retardation Waiver	M	√	√	√
IA	TBI WAIVER	Traumatic Brain Injury Waiver	M	√	√	√
IA	AGED AND/OR DISABLED	Physically Disabled Waiver	M	√	√	√
IA	MR AND/OR DD	Ill and Handicapped Waiver	M	√	√	√
IA	AGED AND/OR DISABLED	Elderly Waiver	M	√	√	√
KS	TBI WAIVER	Traumatic Brain Injury Waiver	M	√	√	
KS	MR/DD WAIVER	Mental Retardation/ Developmentally Disabled Waiver	M	√	√	
KS	AGED AND/OR DISABLED	Frail Elderly Waiver	M	√	√	
KS	PHYSICAL DISABILITIES WAIVER	Physically Disabled Waiver	M	√	√	
KY	AGED AND/OR DISABLED	Home & Community-Based Waiver for Elderly & Disabled Individuals		√	√	
KY	MR AND/OR DD	Supports for Community Living Waiver	√	√	√	√

<b>Access to Services -- HCBS Waiver Requirements</b>						
<b>State</b>	<b>Waiver Category</b>	<b>Waiver Name</b>	<b>MD Order</b>	<b>Support Coordination/ Case Manager</b>	<b>Prior Approval</b>	<b>Medical Necessity</b>
<b>KY</b>	TBI WAIVER	Brain Injuries Waiver	M	√	√	√
<b>LA</b>	AGED AND/OR DISABLED	Elderly & Disabled Adult Waiver	√	√	√	√
<b>LA</b>	MR AND/OR DD	New Opportunities Waiver -- Independence Plus Waiver	M	M	M	M
<b>ME</b>	PHYSICAL DISABILITIES WAIVER	Physically Disabled Waiver		√	√	M
<b>ME</b>	MR/DD WAIVER	Mental Retardation Waiver	√	√	√	√
<b>ME</b>	PHYSICAL DISABILITIES WAIVER	Disabled Adults Under 60		√	√	√
<b>ME</b>	AGED AND/OR DISABLED	Elderly Waiver		√	√	√
<b>MD</b>	AGED AND/OR DISABLED	Waiver for Older Adults	M	√	√	M
<b>MD</b>	AGED AND/OR DISABLED	Living At Home: Maryland Community Choices	M	√	√	M
<b>MD</b>	MR AND/OR DD	Waiver for Individuals with Mental Retardation/Developmental Disabilities -- Community Pathways	√	√	√	
<b>MD</b>	MR AND/OR DD	Waiver for Individuals with Mental Retardation/Developmental Disabilities -- New Directions	√	√	√	M
<b>MA</b>	AGED AND/OR DISABLED	Home & Community-Based Services Waiver for Elders	M	√	√	
<b>MA</b>	MR AND/OR DD	Mental Retardation/Developmental Disability Waiver	M	√	√	
<b>MA</b>	TBI	Traumatic Brain Injury	M	√	√	
<b>MI</b>	DD WAIVER	Habilitation Supports Waiver	M	√	√	√
<b>MI</b>	AGED AND DISABLED WAIVER	Michigan Choice	√	M	√	
<b>MN</b>	AGED AND DISABLED WAIVER	Elderly Waiver	M	√	√	√
<b>MN</b>	PHYSICAL DISABILITIES WAIVER	Community Alternatives for Disabled Individuals Waiver	M	√	√	√
<b>MN</b>	TBI WAIVER	Traumatic Brain Injury Waiver	M	√	√	√
<b>MN</b>	MR/DD WAIVER	Mental Retardation/Related Conditions	M	√	M	√
<b>MN</b>	CHRONICALLY ILL	Community Alternative Care Waiver	M	√	√	√
<b>MS</b>	AGED AND/OR DISABLED	Elderly and Disabled Waiver	M	√	√	M
<b>MS</b>	ADULTS WITH DISABILITIES	Independent Living Waiver	M	√	√	M
<b>MS</b>	MR AND/OR DD	Mental Retardation/Developmental Disability Waiver	√	M	√	M
<b>MS</b>	AGED AND/OR DISABLED	Assisted Living for the Elderly Waiver		M	M	M

Access to Services -- HCBS Waiver Requirements						
State	Waiver Category	Waiver Name	MD Order	Support Coordination/ Case Manager	Prior Approval	Medical Necessity
MS	TBI	Traumatic Brain Injury Waiver	M	M	M	M
MO	PHYSICAL DISABILITIES WAIVER	Physically Disabled Waiver	M	√	√	√
MO	MR/DD WAIVER	Mentally Retarded/ Developmentally Disabled Waiver	M	√	√	√
MO	MR/DD WAIVER	Independent Living Waiver	M	√	√	M
MT	AGED AND DISABLED WAIVER	EPH	M	M	√	
MT	MR/DD WAIVER	Mentally Retarded/ Developmentally Disabled	M	√	√	√
MT	DD WAIVER	Developmental Disabilities Aged 18 & Older	M	√	√	√
NE	AGED AND DISABLED WAIVER	Aged & Disabled Waiver	M	√	√	√
NV	PHYSICAL DISABILITIES WAIVER	Home & Community-Based Waiver for the Physically Disabled	√	√	√	√
NV	AGED AND DISABLED WAIVER	Waiver for the Frail Elderly	√	√	√	√
NH	MR AND/OR DD	Home & Community-Based Care for Developmentally Disabled	√	√	√	M
NH	AGED AND/OR DISABLED	Home & Community-Based Care for the Elderly & Chronically Ill	M	√	√	√
NH	AGED AND/OR DISABLED	Home & Community-Based Care for Acquired Brain Disorders	√	√	√	M
NJ	TBI WAIVER	Traumatic Brain Injury Waiver	M	√	√	√
NJ	DD WAIVER	Community Resources for People with Disabilities Waiver	M	√	√	√
NJ	1115 R&D	Personal Preference Program	√	√		√
NJ	AGED AND DISABLED WAIVER	Enhanced Community Options Waiver	M	√	√	√
NJ	MR/DD WAIVER	Community Care Waiver	M	√	√	√
NM	AGED AND/OR DISABLED	Elderly & Disabled Waiver	M	√	√	M
NM	MR AND/OR DD	Developmental Disabilities Home & Community-Based Waiver	√	√	√	√
NY	AGED AND/OR DISABLED	Aged & Disabled Waiver	M	√	√	M
NY	MR AND/OR DD	Mental Retardation/Developmental Disability Waiver	M	M	√	M
NY	TBI WAIVER	Traumatic Brain Injury Waiver	M	√	M	M
NC	AGED AND/OR DISABLED	Community Alternatives Program for Disabled Adults	M	√	√	M
NC	AGED AND/OR DISABLED	Community Alternatives Program for Persons with AIDS	√	√	√	M

Access to Services -- HCBS Waiver Requirements						
State	Waiver Category	Waiver Name	MD Order	Support Coordination/ Case Manager	Prior Approval	Medical Necessity
NC	MR AND/OR DD	Community Alternatives Program for Persons with Mental Retardation/Developmental Disability	M	√	√	√
NC	MR AND/OR DD	1915(b)(c) Consumer Directed Care for Behavioral Health-Innovations & Piedmont Cardinal Health Plan	M	M	M	M
ND	AGED AND/OR DISABLED	Aged & Disabled Waiver	M	√	√	M
ND	TBI WAIVER	Traumatic Brain Injury Waiver	M	√	√	M
OH	AGED AND/OR DISABLED	Ohio Home Care Waiver	√	√	√	√
OH	MR AND/OR DD	Transitions Waiver	√	√	√	√
OH	AGED AND/OR DISABLED	Passport Waiver	√	√	√	√
OH	AGED AND/OR DISABLED	Choices Waiver	√	√	√	√
OH	MR AND/OR DD	Individual Options Waiver		√		
OH	MR AND/OR DD	Level One Waiver		√		
OK	MR AND/OR DD	Community Waiver	M	√	√	M
OK	AGED AND/OR DISABLED	Advantage	√	√	√	√
OK	MR AND/OR DD	In-Home Supports for Adults	M	√	√	M
OK	MR AND/OR DD	Homeward Bound	M	√	√	M
OR	MR AND/OR DD	Waiver for Individuals with Developmental Disabilities	M	√	√	
OR	AGED AND/OR DISABLED	Seniors & People with Disabilities	M	√	√	
OR	MR AND/OR DD	Support Services Waiver for Adults	√	√	√	√
PA	MR AND/OR DD	Consolidated Waiver for Individuals with Mental Retardation		√	√	M
PA	HIV/AIDS WAIVER	AIDS Waiver	M	M	M	M
PA	PHYSICAL DISABILITIES WAIVER	OBRA Home & Community-Based Waiver	M	M	M	M
PA	AGED AND/OR DISABLED	Attendant Care Waiver	M	√	M	M
PA	AGED AND/OR DISABLED	Pennsylvania Department of Aging Waiver	M	√	M	M
PA	AGED AND/OR DISABLED	Independence Home & Community-Based Waiver	M	√	M	M
PA	MR AND/OR DD	Person/Family Directed Support Waiver		√	√	M
PA	TBI	COMMCARE Waiver Program	M	√	√	M

Access to Services -- HCBS Waiver Requirements						
State	Waiver Category	Waiver Name	MD Order	Support Coordination/ Case Manager	Prior Approval	Medical Necessity
PA	OTHER	Michael Dallas Waiver	M	√	M	M
PA	AGED AND/OR DISABLED	Elwyn Waiver	M	M	M	M
RI	AGED AND DISABLED WAIVER	Aged/Disabled Waiver	M	√	√	√
RI	AGED AND DISABLED WAIVER	Department of Elderly Affairs Waiver	M	√	√	√
RI	MR/DD WAIVER	Mentally Retarded/ Developmentally Disabled Waiver	M	√	√	√
RI	PHYSICAL DISABILITIES WAIVER	People Actively Reaching Independence/Severely Handicapped Waiver	M	√	√	√
RI	ADULTS WITH DISABILITIES	Assisted Living Waiver	M	√	√	√
RI	TBI WAIVER	Habilitation Waiver	M	√	√	√
SC	AGED AND DISABLED WAIVER	Elderly & Disabled Waiver	M	√	M	M
SC	MR/DD WAIVER	Mentally Retarded & Developmental Disabilities Waiver	M	√	M	M
SC	TBI WAIVER	Head & Spinal Cord Injury Waiver	M	√	√	√
SC	MR/DD WAIVER	Mechanical Ventilator Dependent Waiver	M	√	√	M
SC	HIV/AIDS WAIVER	HIV/AIDS Waiver	M	√	M	M
SC	PHYSICAL DISABILITIES WAIVER	South Carolina Choice Waiver	M	M	M	M
SD	AGED AND/OR DISABLED	Elderly Waiver	√	√	M	M
SD	MR AND/OR DD	Intermediate Care Facility for the Mentally Retarded Waiver	√	√	M	M
SD	MR AND/OR DD	Family Support Program	√	√	√	M
TN	MR/DD WAIVER	Mental Retardation Waiver	√	√	√	√
TN	MR/DD WAIVER	Self-Determination Waiver Program	√	√	√	√
TN	MR/DD WAIVER	Mental Retardation Waiver	√	√	√	√
TN	AGED AND DISABLED WAIVER	Elderly & Disabled Waiver	√	√	√	√
TN	AGED AND DISABLED WAIVER	Adapt	√	√	√	√
TN	PHYSICAL DISABILITIES WAIVER	Disabled Individuals over 21 Waiver	√	√	√	√
TX	AGED AND DISABLED WAIVER	Consolidated Waiver Program	√	√	√	√
TX	MR/DD	Home & Community-Based Wavier	√	√	√	√

Access to Services -- HCBS Waiver Requirements						
State	Waiver Category	Waiver Name	MD Order	Support Coordination/ Case Manager	Prior Approval	Medical Necessity
TX	MR/DD WAIVER	Community Living Assistance & Support Services Program	√	√	√	√
TX	AGED AND DISABLED WAIVER	Community-Based Alternatives	√	√	√	√
TX	AGED AND DISABLED WAIVER	CBA-STAR+PLUS	M	√	M	√
TX	ADULTS WITH DISABILITIES	Waiver for People with Deaf-Blindness & Multiple Disabilities		√	√	√
TX	MR/DD WAIVER	Consolidated Waiver Program	√	√	√	√
TX	MR/DD WAIVER	Texas Home Living Program		√	√	√
UT	MR/DD WAIVER	Developmental Disabilities/Mental Retardation Waiver	M	√	M	M
UT	AGED AND/OR DISABLED	Aged Waiver	M	√	M	√
UT	TBI WAIVER	Acquired Brain Injury Waiver	M	M	M	M
UT	MR/DD	Nursing Facility Level of Care Waiver	M	M	M	M
VT	1115 R&D	1115 Vermont Global Commitment Waiver	M	√	√	
VT	1115 R&D	1115 Choices for Care Medicaid Waiver	M	√	√	
VA	MR/DD WAIVER	Mental Retardation Waiver	M	√	√	√
VA	AGED AND DISABLED WAIVER	Elderly or Disabled with Consumer Direction Waiver Services	M	√	√	√
VA	MR/DD WAIVER	Individual & Family Developmental Disabilities Support Waiver	M	√	√	√
WA	AGED AND DISABLED	Medically Needy Residential Waiver	M	√	√	√
WA	AGED AND DISABLED WAIVER	Medically Needy In-Home Waiver	M	√	√	√
WA	AGED AND DISABLED WAIVER	Community Options Program Entry System Waiver	M	√	√	√
WA	MR/DD WAIVER	Basic Waiver	M	√	√	√
WA	MR/DD WAIVER	Basic Plus Waiver	M	√	√	√
WA	MR/DD WAIVER	Community Protection Waiver	M	√	√	√
WA	MR/DD WAIVER	Core Waiver	M	√	√	√
WV	MR/DD WAIVER	Mentally Retarded/ Developmentally Disabled Waiver	M	√		M
WI	AGED AND DISABLED WAIVER	Community Options Waiver	√	M	√	M
WI	MR/DD WAIVER	Mentally Retarded/ Developmentally Disabled Waiver	√	√	√	√



<b>Access to Services -- HCBS Waiver Requirements</b>						
<b>State</b>	<b>Waiver Category</b>	<b>Waiver Name</b>	<b>MD Order</b>	<b>Support Coordination/ Case Manager</b>	<b>Prior Approval</b>	<b>Medical Necessity</b>
<b>WI</b>	AGED AND DISABLED WAIVER	Aged & Disabled Waiver		√	√	√
<b>WI</b>	TBI WAIVER	Traumatic Brain Injury Waiver	M	M	M	M
<b>WI</b>	DD WAIVER	Wisconsin Community Integration Program	√	M	M	M
<b>WY</b>	MR/DD WAIVER	Adult Developmental Disability Waiver	√	√	√	M
<b>WY</b>	TBI WAIVER	Acquired Brain Injury Waiver	√	√	√	M
<b>WY</b>	AGED AND DISABLED WAIVER	Aged & Disabled Waiver	M	√	√	√
<b>Total with Requirement</b>		<b>202 Waivers</b>	<b>50</b>	<b>180</b>	<b>163</b>	<b>99</b>
n = 51 (50 states and Washington, DC).						
<b>NOTES:</b> √=Required, Blank=Not Required, M=Missing Data						
<b>SOURCE:</b> Abt Associates review of Medicaid HCBS waiver coverage policies, June 2005-February 2006.						

# **COMPENDIUM OF HOME MODIFICATION AND ASSISTIVE TECHNOLOGY POLICY AND PRACTICE ACROSS THE STATES**

## Files Available for This Report

### VOLUME I: FINAL REPORT

HTML <http://aspe.hhs.gov/daltcp/reports/2006/HM-ATI.htm>

PDF <http://aspe.hhs.gov/daltcp/reports/2006/HM-ATI.pdf>

### VOLUME II: STATE PROFILES

HTML (Alabama through Missouri)  
<http://aspe.hhs.gov/daltcp/reports/2006/HM-ATII.htm>  
(Montana through Wyoming)  
<http://aspe.hhs.gov/daltcp/reports/2006/HM-ATII2.pdf>

PDF (Alabama through Massachusetts)  
<http://aspe.hhs.gov/daltcp/reports/2006/HM-ATII.pdf>  
(Michigan through Texas)  
<http://aspe.hhs.gov/daltcp/reports/2006/HM-ATII2.pdf>  
(Utah through Wyoming)  
<http://aspe.hhs.gov/daltcp/reports/2006/HM-ATII3.pdf>