

State Studies Find Home and Community-Based Services to Be Cost-Effective

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The Purpose

The vast majority of people in need of long-term services and supports (LTSS) want to live in their own homes and communities. States have made progress in providing greater access to home and community-based services (HCBS) for people with low incomes. Many states have also conducted studies to ensure that HCBS are cost-effective. This report contains a summary of a collection of relevant state studies as well as Web links.

The purpose of this work was to collect public HCBS cost-effectiveness studies from the states and make them available electronically in one place, so state policymakers, researchers, advocates, and others could benefit from states' experience and analyses.

The collected studies, published between 2005 and 2012, include state-specific public studies, evaluations, and fiscal analyses. The studies address the actual or potential state fiscal impact (or justification) of HCBS alternatives to nursing facility care or the fiscal impact of HCBS programs using state-specific data. These reports include both state-sponsored studies or analyses and studies prepared by external entities. The focus was to collect publicly released studies or analyses that were relied upon by state policymakers to make decisions about HCBS program policymaking.

Major Findings

Many states have evaluated publicly funded HCBS programs, resulting in this collection of 38 studies. The studies that evaluated the cost effectiveness of HCBS supported Medicaid “balancing” and other efforts to move more resources toward HCBS rather than institutional care.

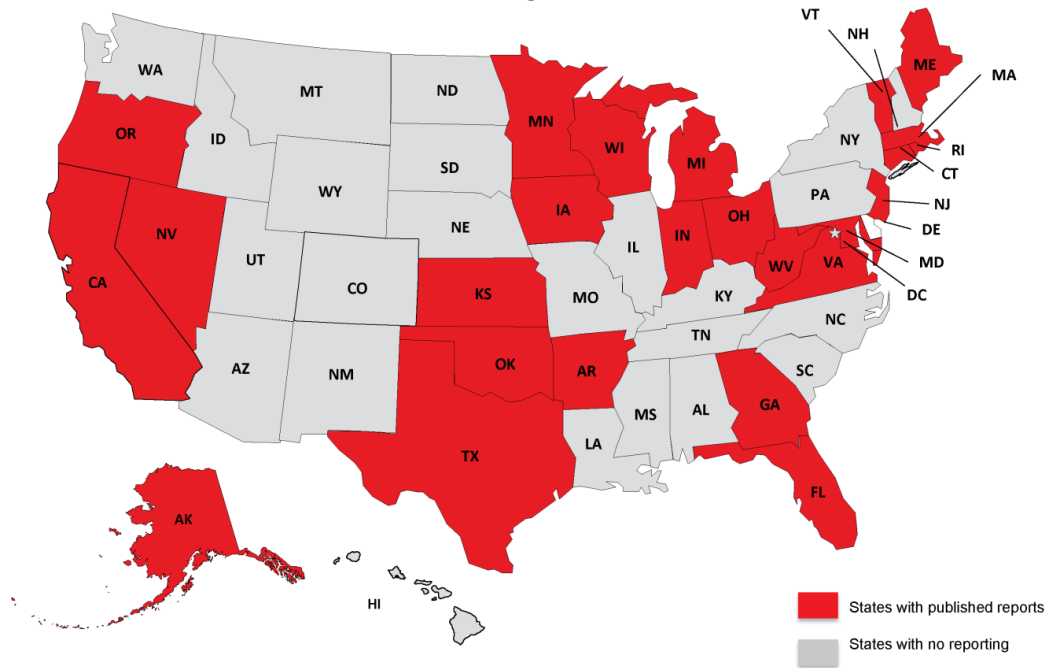
This bibliography shares both qualitative and quantitative analyses that were conducted in states over the past 8 years (most within the past 5 years). State policymakers (both surveyed state Medicaid directors and aging and disability directors) have used these studies to make informed decisions about LTSS. All but three of the reports are available online.

The studies consistently provide evidence of cost containment and a slower rate of spending growth as states have expanded HCBS.

Although few studies document absolute cost savings, the studies consistently found much lower per-individual, average costs for HCBS compared with institutional care. Overall, the findings illustrate cost reductions by diverting and transitioning individuals from nursing home care to HCBS.

Specifically, most of the studies contained quantitative analyses, which

States with Published Studies Evaluating Publicly Funded HCBS Programs, 2005–2012



included information on spending, utilization, enrollment, and costs:

- 33 studies analyzed spending;
- 30 studies analyzed Medicaid utilization, 14 analyzed Older Americans Act utilization, and 15 analyzed state or other funded programs (many studies looked at utilization from more than one program);
- 28 studies analyzed client enrollment;
- 19 studies reported savings or a reduction in the growth of costs;
- 9 studies contained a cost-benefit analysis; and
- 2 studies analyzed return on investment.

In addition to spending data, the studies provided a wealth of qualitative information, including demographics, health status, service access and capacity, social factors, and client satisfaction and health outcomes:

- 27 studies analyzed demographics;

- 19 studies analyzed service access and capacity;
- 17 studies analyzed health status;
- 16 studies analyzed social factors; and
- 5 studies each analyzed client satisfaction and health outcomes.

Methodology and Studies’ Origins

This work was a significant 2-year effort. In 2011, state Medicaid and aging and disability agency administrators were asked if they used state HCBS cost-effectiveness studies and, if so, to supply the name and link to the study, if possible. These questions were part of a much larger annual LTSS economic survey of the AARP Public Policy Institute, Health Management Associates, and National Association of States United for Aging and Disability (NASUAD). In 2012, the authors sent follow-up emails to the states that did not respond to the survey, and the authors also conducted a corresponding

literature review. After collecting the studies, the authors read, wrote summaries, and categorized the fiscal elements of the studies.

States often relied on important collaborations to conduct these studies. Federal resources helped to fund many of the studies. In addition, many states contracted with well-respected universities or consultants with a long history and reputation in LTSS policy to conduct the studies.

Roughly one-third of the studies utilized federal funding. Many states used some of their Real Choice Systems Change grants to fund the studies. For example, several states received U.S. Centers for Medicare & Medicaid Services (CMS) System Change grants to create a state profile tool and report to assess their progress toward greater reliance on HCBS. A few states used some of their Money Follows the Person funds to analyze HCBS performance. A few states used the U.S. Administration on Aging's (AoA's) Performance Outcomes Measure Project (POMP) grant to assess the impact and cost of AoA programs.

Many states have long-standing relationships with universities to conduct research or rely on consultants who are well known in the LTSS field. These universities include: the University of California at San Francisco, the University of North Florida, the University of Kansas, the University of Southern Maine, the University of Maryland in Baltimore County, the University of Massachusetts Medical School, and Scripps Gerontology Center at Miami University. Consultants from the Lewin Group, Truven Health Analytics (formerly Thomson Reuters), the National Academy for State Health

Policy, and Westat conducted several of the evaluations.

Finally, some states relied on their health and aging agencies as well as their state legislative and auditing bureaus to conduct these studies.

For more information, please see the attached bibliography with Web links and summaries as well as the table of fiscal elements.

The AARP Public Policy Institute and Health Management Associates did not assess the validity or reliability of the studies contained in the bibliography. The bibliography is not comprehensive nor is it a meta-analysis. However, these studies have provided support for greater access to HCBS as state policymakers in both Medicaid and aging and disability agencies have expanded these cost-effective options.

Acknowledgments

The authors gratefully thank the state administrators in the Medicaid agencies and state aging and disability departments. Without their participation, this bibliography would not have been possible. The authors would also like to thank Joanne Lamphere, Ilene Henshaw, and the AARP state offices for their interest in and support of this project as well as their patience.

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Appendix A. Bibliography

Alaska

Alaska Medicaid Budget Group, Finance and Management Services, Department of Health and Social Services; “Long-Term Forecast of Medicaid Enrollment and Spending in Alaska: Supplement 2010–2030”; January 2011. Accessed December 2012 at: <http://dhss.alaska.gov/fms/Pages/home.aspx>.

This report is one in a series of annual reports that provide long-term forecasts of Medicaid enrollment, utilization, and spending trends over a 20-year period, based on existing policy and historic trends. The purpose of the report is to allow policymakers to assess future Medicaid trends and take proactive measures. The report compares trends in home and community-based services (HCBS) waivers, personal care and nursing facilities, and enrollment and expenditures by demographic distributions and service categories. The authors expect older adults to be the fastest growing population in Alaska with spending on long-term services and supports (LTSS) increasing as a share of total spending. Compared with HCBS waiver and personal care services expenditures (7.9 percent and 10.9 percent annual growth rate, respectively), nursing home expenditures are projected to grow only 4.4 percent annually.

Arkansas

Arkansas Department of Human Services; “Choices in Living for Arkansans with Long-Term Care Needs: Arkansas’s Long-Term Care System: Planning for the Future”; 2008. Accessed December 2012 at: <http://www.daas.ar.gov/pdf/ChoicesinLivingforArkansanswithLTCNeedsFinal-nm.pdf>.

The report lays out a number of policy recommendations to continue progress toward Arkansas’s goal of balancing the LTSS system through enhancing community-based services. The report acknowledges a higher rate of expenditures for older adults and individuals with disabilities in Arkansas institutions than the national average. Using a definitional framework from other researchers, Arkansas Division of Aging and Adult Services analyzed U.S. Centers for Medicare & Medicaid Services (CMS) Minimum Data Set (MDS)¹ for the prevalence of “low-care need” residents residing in nursing facilities. From a sample of 12,399 unique individuals, an estimated 10.7 percent of Medicaid per-diem residents were classified as low-care, using a narrow definition for this level of care.² The state estimates that it spent \$59 million on serving low-care needs Medicaid enrollees in an institution that could have been served in the community for a lower cost.

Holly C. Felix, Glen P. Mays, M. Dathryn Steward, Naomi Cottoms, and Mary Olson; “Medicaid Savings Resulted When Community Health Workers Matched Those with Needs to Home and Community Care”; *Health Affairs* 30, no. 7 (2011): 1366–1374. Accessed December 2012 at: <http://content.healthaffairs.org/content/30/7/1366.full?ikey=zrqbtjW.Gr7NQ&keytype=ref&siteid=healthaff>.

Researchers studied the effectiveness of the Arkansas Community Connector Program (CCP), a Medicaid demonstration program in three counties that targets individuals at risk for entering nursing homes and links them with appropriate community-based services and supports. They tested the hypothesis that the CCP participants experienced larger growth in the use of and spending for Medicaid HCBS, and smaller growth in overall Medicaid spending, compared with the comparison group. Expenditure measures included inpatient

and outpatient medical services, nursing home services, HCBS, and other services. The longitudinal study spanned 3 years of intervention, plus 1 year before and after the intervention, for both the intervention group and a statistically matched non-intervention group. Researchers determined the result of the intervention was a 23.8 percent average reduction in annual Medicaid spending per participant during the 3-year period. Net savings equaled \$2.619 million for the 919 individuals included in the study's intervention group, or a return on investment of \$2.92 per dollar invested in the program.

California

Robert Mollica, National Academy for State Health Policy; Leslie Hendrickson, PhD; Hendrickson Development; "Home and Community-Based Long-Term Care: Recommendations to Improve Access in California"; for California Community Choices; California Health and Human Services Agency; November 2009. Accessed December 2012 at: http://communitychoices.info/docs/ltc_study/REPORT%20Final%20PDF.pdf.

This comprehensive report presents results of the financing study of the California Community Choices program, funded by a 5-year grant from CMS to increase access to HCBS. The study was initiated to improve the state's understanding of the financial and structural barriers to increasing consumer access to HCBS, and to provide recommendations that enable the state to manage funding more effectively for LTSS to promote community living options. The authors provide a comprehensive description of California's system of care, programs, demographics, and expenditure and utilization trends. The authors also discuss the cost effectiveness of HCBS, in terms of cost avoidance, and for transitioning individuals from institutions to the community. The authors acknowledge that calculating actual dollar cost savings of HCBS requires more complex analysis. However, they note the differential between average institutional and community-based per member costs supports the theory that HCBS can slow the growth of LTSS expenditures while meeting policy and public preferences.

Robert Newcomer, Charlene Harrington, Julie Stone, Andrew B. Bindman, University of California San Francisco; Mark Helmar, California Department of Health Care Services; "California's Medi-Cal Home & Community Based Services Waivers, Benefits & Eligibility Policies, 2005–2008"; August 2011. Accessed December 2012 at: <http://thescanfoundation.org/california-medicare-research-institute-californias-medi-cal-home-community-based-services-waivers>.

This report is the first of a series from a 36-month project funded by the SCAN Foundation and California's Department of Health Care Services (DHCS) through a grant to the California Medical Research Institute (CAMRI) in 2010. The *Comprehensive Analysis of Home and Community-Based Services Project*,³ known as the HCBS Evaluation, includes three primary research tasks:

1. a review and summary of the published research on cost effectiveness of HCBS;
2. a comprehensive analysis of utilization and cost information for Medi-Cal beneficiaries receiving HCBS in California; and
3. an analysis of the costs and utility of HCBS benefits incorporated into waivers and in managed care.

The 3-year study seeks to determine the relationship between participation in HCBS and the use of institutional settings, and to determine whether HCBS programs reduce

emergency room use, hospital stays, nursing home stays, and total Medi-Cal and Medicare expenditures. Later phases of the study will utilize a longitudinal database of Medi-Cal and Medicare claims and nursing home and personal care assessments from 2005 through 2008 to assess trends in expenditures and utilization within components of California's LTSS system. While this report and the following do not address the cost effectiveness of HCBS directly, they provide the conceptual and technical framework needed for a comprehensive assessment, which is expected in forthcoming reports as the project progresses. As such, the reports provide valuable information for other states, or for researchers pursuing similar analysis.

The purpose of this first report is to inform the study by providing a comprehensive description of the state's LTSS system, including Medicaid HCBS, state plan LTSS, and institutional services. The report describes eligibility criteria and benefits, and provides enrollment trends and expenditures for the years 2005 through 2008.

Julie Stone, MA; Robert J. Newcomer, PhD; Arpita Chattopadhyay, PhD; Todd P. Gilmer, PhD; Phillip Chu, MA; Chi Kao, PhD; Andrew B. Bindman, MD; "Studying Recipients of Long-Term Care Services and Supports: A Case Study in Assembling Medicaid and Medicare Claims and Assessment Data in California"; November 16, 2011. Accessed December 2012 at: http://thescanfoundation.org/sites/thescanfoundation.org/files/CaMRI_Data_Case_Study_Report_3.pdf.

This second report of *The Comprehensive Analysis of Home and Community-Based Services Project* (described above) presents the processes and challenges of acquiring and assembling the large amount of data needed to fully evaluate services provided to individuals with LTSS needs. The data will be used to develop an integrated longitudinal database of Medicaid and Medicare claims and assessment data, which will then be analyzed to describe the characteristics of LTSS users in California, including demographics, medical conditions, disabilities, and costs and patterns of service use across both Medi-Cal and Medicare. The report describes the process researchers went through with state and federal sources to obtain the data, much of which is privacy protected; the complexity of linking and cleaning data from different sources; and the challenges of integrating different assessment datasets from multiple state departments. The authors provide recommendations for facilitating such research in the future.

R. Newcomer, C. Harrington, J. Stone, A. Chattopadhyay, S. Lee, T. Kang, P. Chu, and A. Bindman; "Medicaid and Medicare Spending on Acute, Post-Acute and Long-Term Services and Supports in California"; December 2012.⁴ Accessed December 2012 at: http://www.thescanfoundation.org/sites/thescanfoundation.org/files/camri_medicare_medicaid_spending-12-12-12.pdf.

A 2012 report from *The Comprehensive Analysis of Home and Community-Based Services Project* (described above) presents findings on Medicaid and Medicare spending by creating a dataset that links Medicare claims, Medi-Cal (California's Medicaid program) claims, and Medi-Cal assessment data for recipients of LTSS in California. This multi-year project's key findings were that total Medi-Cal LTSS spending per recipient was \$14,445 in 2008. LTSS spending on people who are dually eligible for Medicare and Medicaid coverage was \$15,541, compared with \$10,950 for Medi-Cal only recipients (a 42 percent difference). However, spending on acute and other medical care was the largest category of spending for LTSS recipients in 2008, with average per capita spending at \$29,220. Medicare paid 83 percent of this total. About 52 percent of all LTSS spending was for HCBS, and per

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recipient spending on nursing facilities was three times higher than for HCBS (\$32,406 for nursing facility care versus \$9,129 for HCBS). The study concludes that the high investment in HCBS in California is a promising foundation upon which to increase HCBS further to potentially reduce institutional services and avoidable hospitalizations.

Connecticut

Connecticut Department of Social Services; “Home Care at a Glance; SFY 2010 Annual Report to the Legislature”; July 2009–June 2010. Accessed December 2012 at: http://www.ct.gov/dss/lib/dss/pdfs/reports/sfy_2010_ct_home_care_annual_report.pdf.

This report provides an assessment of the Connecticut Home Care Program for Elders (CHCPE). The assessment of this state-funded HCBS program and Medicaid waiver for older people with LTSS needs living in the community for the state legislature includes assisted living components, care management, and the Quality Enhancement System. A hypothetical cost-effectiveness model developed by the Department computes annual savings of nearly \$107 million compared with serving participants in a nursing facility. The model takes into consideration the expense of waiver services, skilled nursing, home health, Older Age Assistance services, administrative costs, and back-filling of empty nursing home beds that would not occur if the CHCPE program did not exist. In addition to expenditures for services, the analysis includes demographic and social characteristics of participants, enrollment trends, admissions and discharges, and health status indicators. Appendices include a program history, authorizing legislation, and results of a customer satisfaction survey.

Florida

Florida Department of Elder Affairs; “Florida’s State Profile Tool”; July 2009. Accessed December 2012 at: <http://elderaffairs.state.fl.us/doea/pubs/pubs/Florida'sStateProfile.pdf>.

This report represents the results of a State Profile Tool grant received from CMS under the Real Choice Systems Change program. The purpose of the report is to facilitate assessment of Florida’s effort to balance the LTSS delivery system to provide increased options for community-based services and decrease demand for institutional-based care. The profile presents information on Florida’s LTSS system, provides demographic and utilization trends for various groups using LTSS, and forecasts future demand. With respect to cost effectiveness, the document notes that three evaluation studies of the state’s five Medicaid waivers conducted by the University of North Florida found HCBS to be a cost-effective alternative to institutional care for frail older persons, particularly for those without caregivers.⁵

Adam Shapiro, PhD; Chung-Ping Loh, PhD; “Advanced Performance Outcome Measures Project (POMP): Estimates of Medicaid and General Revenue Cost-Avoidance from HCBS Utilization”; University of North Florida; August 2010. Accessed April 2012 at: http://www.gpra.net/ppt/POMP2010_UNF_Final_Report.pdf.⁶

This analysis builds on prior work of the authors (noted above) to determine whether HCBS is cost effective. The researchers obtained cost and assessment data for individuals residing in nursing homes who were placed in three study groups: 1) individuals who had applied for and received HCBS; 2) individuals who had applied for but did not receive HCBS (waitlist); and 3) individuals who did not apply for or receive HCBS. The longitudinal study spanned service years from 2002 through 2008. The authors presented

evidence that HCBS utilization produces cost savings compared with costs of individuals that do not use these services, most notably in a reduction of nursing home expenses. Nursing home cost savings associated with HCBS use ranged from \$1,000 to \$1,500 per member per month compared with non-HCBS applicant utilization, depending on HCBS use intensity. The authors incorporated both Medicaid and non-Medicaid LTSS in assessing overall cost effectiveness.

Georgia

Georgia Department of Audit and Accounts; “Requested Information on the SOURCE Program in the Department of Community Health”; Project ID: 07-21; January 9, 2008. Accessed December 2012 at: <http://www.audits.ga.gov/rsaAudits/viewMain.aud>. Click “Performance Reports” and filter using publication year.

This report was prepared in response to a request by the Georgia Senate Appropriations Committee concerning the effectiveness and efficiency of the Service Options Using Resources in a Community Environment Program (SOURCE). SOURCE is the state’s 1915(c) waiver for the aged, blind, and physically disabled populations. The authors found that the SOURCE program is a cost-effective alternative to institutional care for this population. The research compares the average expenditures per member per month for SOURCE recipients and services with average expenditures per month for nursing home utilization. The analysis does not take into consideration acute care, Medicare, or non-Medicaid expenditures.

Myers & Stauffer LLC; “Final Report on SOURCE Program Cost Effectiveness”; prepared for the Georgia Department of Community Health; July 14, 2006. Though a direct link is not available, a summary of report findings is available at: http://www.myfloridahouse.gov/sections/Documents/loaddoc.aspx?PublicationType=Committees&CommitteId=2546&Session=2010&DocumentType=Action%20Packets&FileName=SPCSEP_Actn_3-4-2010.pdf. For the full report, contact the state’s Department of Community Health.

This report summarizes the findings of a comparative analysis of the SOURCE program, Georgia’s HCBS waiver for aged, blind, and disabled individuals and individuals in nursing facilities to determine the cost effectiveness of the waiver program. The researchers established comparison groups by cross-matching demographics (age, gender, etc.) and level of care needs within the two comparison groups. Per-member costs were calculated using LTSS costs and acute care costs such as pharmacy, inpatient, emergency room, and durable medical equipment. Among the key findings, researchers reported that the SOURCE program is cost effective when compared with nursing home care for comparable residents. The research demonstrated cost effectiveness assessed under a number of different parameters, such as different levels of care needs, people dually eligible for Medicare and Medicaid programs, and Medicaid-only comparisons.

Indiana

Indiana Family and Social Services Administration; “Community and Home Options to Institutional Care for the Elderly and Disabled (CHOICE): Annual Report State Fiscal Year 2010”; July 1, 2009–June 30, 2010. Accessed December 2012 at: http://www.in.gov/fssa/files/Choice_Annual_Report_2010.pdf.

The report, required by statute, assesses the state-funded CHOICE program, as well as the federal Social Services Block Grant (SSBG), Older Americans Act-Title III

programs, the Aged and Disabled Medicaid Waiver, and the Traumatic Brain Injury Medicaid Waiver. The report provides expenditure and enrollment data for all the above programs, demographic and social characteristics, and some health status data for CHOICE enrollees. The report compares the average cost per month for CHOICE services—\$328 in FY 2010—with the average institutional cost of \$3,551, but notes that this does not represent actual savings, as a CHOICE client is not necessarily eligible for nursing facility services or financially eligible for Medicaid.

Iowa

Steve Eiken, Mary Jo Iwan, Lisa Gold; “Iowa State Profile Tool: An Assessment of Iowa’s Long-Term Support System; Thomson Reuters for Iowa Department of Elder Affairs”; March 31, 2009. Accessed December 2012 at: http://www.aging.iowa.gov/Documents/SPT_FinalReport.pdf.

This report provides a high-level assessment of Iowa’s progress to balance its LTSS system to increase community-based options. The report provides demographic data, trends in cost and utilization, a description of organizational structure, and assessment of workforce capacity. Iowa has a high rate of institutional utilization relative to other states, but between 2004 and 2008 the state made steady progress toward decreasing the rate while simultaneously increasing the rate of HCBS utilization. The report does not address cost savings directly, but describes the degree to which Iowa’s system incorporates eight components found in other successful systems.

Kansas

Kelley Macmillan, PhD; Roxanne Rachlin, MHSA; Rosemary Chapin, PhD; Devyani Chandran, MSW; Skye Leedahl, MA; Beth Baca, LMSW; Mary Zimmerman, PhD; and Pat Oslund, MS; “The Community Tenure Status of CARE Assessment Customers 60 Months after Diversion”; University of Kansas School of Social Welfare Office of Aging and Long Term Care, for the Kansas Department on Aging and the Kansas Department of Social and Rehabilitation Services; December 2007. Accessed December 2012 at: <http://www.oaltc.ku.edu/Reports/Community%20Tenure%20%20Report%20Year%205%20FINAL.pdf>.

The report presents the findings of a longitudinal study of 599 individuals who applied for nursing facility placement; received a Client Assessment, Referral, and Evaluation (CARE) Assessment; and were diverted from nursing facility care toward home and community alternatives in SFY 2002. The purpose of the diversion study was to track the community tenure status of diverted individuals for 60 months after they received the CARE Assessment. This study builds on their previous study, which tracked clients for 36 months. The study tracks the state publicly funded service utilization of diverted clients as well as expenditure data for Medicaid HCBS, state General Funded, and Older American Act services used by diverted consumers who remain in the community. Overall findings conclude that state publicly funded services are cost effective and that a higher proportion of diverted clients resided in the community compared to permanently residing in a nursing home throughout the 60 months. Although many diverted individuals received state publicly funded services, none of them received these services continuously during the 60 months; they used the services only for a short time. Cost and utilization analysis is set in the context of identified key policy questions. In addition, the report compared individuals who became permanent nursing facility residents with the

diverted consumers who remained in the community. Among several findings, they found higher rates of diverted older adults who utilized state publicly funded services maintained community residency, suggesting these services play a key role. This study is of significance because no other study has tracked a cohort of nursing facility applicants for 5 years to identify residential outcomes.

Maine

Julie Fralich, Stuart Bratesman, Karen Mauney, Cathy McGuire, Kerry Sullivan, Louise Olsen, Tina Gressani, Jasper Ziller, Catherine Gunn; “Chartbook: Older Adults and Adults with Disabilities: Population and Service Use Trends in Maine”; Muskie School of Public Service; University of Southern Maine; 2010. Accessed December 2012 at: <http://www.maine.gov/dhhs/oes/documents/Chartbook-LTC-Needs-Assessment.pdf>.

The Chartbook provides an update to the “Assessment of Maine’s Long Term Care Needs Baseline Report: Demographics and Use of Long Term Care Services in Maine,” published in 2007. This update provides historic and projected demographic trends for Maine’s overall population and for those that require LTSS. The document covers LTSS utilization and expenditure trends, and health and functional status trends for LTSS users and MaineCare (Medicaid) enrollees. The report also assesses the infrastructure and capacity for both institutional and community-based services for the aging population. While the report does not specifically address the cost effectiveness of HCBS as an alternative to institutional care, it does provide a comparison of average monthly costs per service user across the continuum of LTSS provided in the state.

Eileen Griffin, Julie Fralich, Cathy McGuire, Louise Olsen, Stuart Bratesman; “A Cross-System Profile of Maine’s Long Term Support System: A New View of Maine’s Long Term Services and Supports and the People Served”; prepared by the Muskie School of Public Service; University of Southern Maine for the Maine Department of Health and Human Services; March 2009. Accessed December 2012 at: <http://www.maine.gov/dhhs/reports/spt-final.pdf>.

This study shows the results of a State Profile Tool grant received from CMS under the Real Choice Systems Change program and provides a profile of LTSS for several groups of recipients including older adults and adults with disabilities. Besides descriptive information, the profile includes demographic and utilization data, administration and management information, and key components associated with balancing an LTSS system. The purpose of the report is to establish a baseline for developing policy goals for LTSS; thus, it does not report on cost savings. The report also serves to:

- establish standard definitions for populations and services to facilitate analysis;
- provide a common framework and vocabulary to promote a cross-system view of services;
- develop a listing of characteristics to measure the restrictiveness of a setting; and
- develop criteria for evaluating key system components to use as a benchmark for improvements.

Maryland

The Hilltop Institute; “Medicaid Long-Term Services and Supports in Maryland: Money Follows the Person Metrics Summary”; prepared for Maryland Department of Health and Mental Hygiene; January 18, 2011. Accessed December 2012 at: <http://www.hilltopinstitute.org/publications/MFPMetricsQoLSurveyResponses-January2011.pdf>.

This report summarizes an assessment of the Maryland Money Follows the Person (MFP) program through performance metrics developed for the program. The key findings include trends in institutional and community-based care, and transitions between these delivery systems. The report documents health status characteristics of individuals that transitioned from institutional care to those that did not transition, and compares MFP transitions with non-MFP transitions from various types of institutional facilities. The report compares service utilization distribution and per-member, per-month, pre- and post-transition costs for transitions into each of the state’s waiver programs. Finally, the report assesses quality of life through a consumer survey to individuals at transition and 1 year post-transition. Overall, Hilltop found that Medicaid costs declined after individuals transitioned to the community. For example, per-transition costs FY 2008–FY 2010 for individuals in the Medicaid Living at Home Waiver were \$9,114 per member per month, compared with \$5,957; these costs include inpatient, institutional LTSS, HCBS, outpatient, physician, dental, pharmacy, and capitation services, as well as services from special programs. They also found that a higher percentage of transitioned individuals reported higher quality of life.

Maryland Department of Aging; “Analysis of the FY 2012 Maryland Executive Budget, 2011”; Department of Aging Operating Budget Data; prepared for the Legislature; 2011. Accessed December 2012 at: <http://mqaleg.maryland.gov/Pubs/BudgetFiscal/2013fy-budget-docs-operating-D26A07-Department-of-Aging.pdf>.

Updated annually, these budget documents provide an analysis of performance trends of the department, including trends for the number of seniors receiving various HCBS, funding for services, and the percentage of those in need actually served. The analysis also compares the annual cost per senior for the Older Adults Waiver, nursing home care, and other community-based services, as well as the number served with these programs versus the number on the waiting list. The document also looks at trends in the Guardianship program, complaints to the Ombudsman, and employment and training for seniors programs. The department considers community-based services to be a cost-effective investment for the state because many of the people who received HCBS would have required nursing home services if the HCBS were not available. The cost of nursing homes is more than double the cost of the Medicaid HCBS Waiver for Older Adults, which is the most expensive community-based service offered by the aging department.

Massachusetts

Office of Long-Term Support Studies: Darlene O'Connor, PhD; David Centerbar, PhD; Cheryl Cumings, MPA; Valerie Konar, MBA; Eliza Lake, MSW; Faith Little, MSW; Wendy Trafton, MPH. Center for Health Law and Economics: Stephanie Anthony, JD, MPH; Robert Seifert, MPA; Jean Sullivan, JD; "Long-term Supports in Massachusetts: A Profile of Service Users"; University of Massachusetts Medical School; April 2009. Accessed December 2012 at: <http://www.mass.gov/eohhs/docs/eohhs/ltc/ltss-profile-report.pdf>.

The authors provide a comprehensive review of the populations needing LTSS in Massachusetts and project future demand. This is a state population-based overview that includes demographics, health status, service utilization, and payer information. The report summarizes system capacity, an assessment of unmet LTSS needs, and gaps in access to Massachusetts's LTSS system. This report served to inform the work of the Massachusetts Long-Term Care Financing Advisory Committee.

UMass Medical School Center for Health Law and Economics and Office of Long-Term Support Studies; "Securing the Future: Report of the Massachusetts Long-Term Care Financing Advisory Committee"; November 2010; provided on behalf of the Massachusetts Long-Term Care Financing Advisory Committee. Accessed December 2012 at: <http://www.mass.gov/eohhs/docs/eohhs/ltc/ma-ltcf-full.pdf>.

This report provides the policy framework of the state's Long-Term Care Financing Advisory Committee. It lays out options to achieve the goal of universal access to LTSS coverage in the state using affordable and sustainable financing mechanisms. The report describes strategies for short- to long-term timeframes. The researchers conclude that with implementation of the recommended reforms, individual and caregiver out-of-pocket expenses for LTSS would be reduced from 38 percent of the total cost to 15 percent by 2030. The cost for the state would be reduced from 21 percent to 17 percent of LTSS care, for a difference of nearly \$1 billion. The report identifies three core financing strategies: 1) Increase utilization of private LTSS financing mechanisms (insurance, reverse mortgages, annuities, etc.); 2) Expand MassHealth coverage to achieve equity in access to LTSS (limited and comprehensive community-based LTSS to targeted groups); and 3) Promote the use of social insurance programs that allow all people to prepare for financing their LTSS needs (CLASS, state-sponsored coverage, supplemental coverage, etc.).

Michigan

Michigan Department of Community Health, Office of Long-Term Care Supports and Services; "Michigan Profile of Publicly-Funded Long-Term Care Services"; June 2009. Accessed December 2012 at: http://www.michigan.gov/documents/ltc/SPT_Final_Report_7-01-09_300163_7.pdf.

Michigan is one of 10 states that received a CMS grant under the Real Choice Systems Change program to develop a profile of the state's publicly funded LTSS. The profile presented in this report includes an overview of demographics and projected LTSS demand; service utilization; a description of the infrastructure and capacity needs; and initiatives and progress toward reforming the system to increase HCBS options. The report notes that expenditures and LTSS days in nursing facilities declined for the first time in FY 2008 because of balancing efforts. The state legislature increased HCBS funding beginning in FY 2006.

Minnesota

Minnesota Department of Human Services; “Status of Long-Term Care in Minnesota, 2010”; prepared for the Legislature; 2010. Accessed December 2012 at: http://www.dhs.state.mn.us/main/idcplg?IdcService=GET_DYNAMIC_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=id_005728.

The purpose of this report is to provide the legislature with the status of efforts to balance the state’s LTSS system. The comprehensive analysis includes demographic trends; estimates of LTSS needs; the status of HCBS, senior housing, and nursing home services; service capacity and gaps; and trends in utilization and expenditures. The report also includes quality performance measure data for nursing homes; capacity, cost, and utilization trends; and projections. The report concludes with an assessment of four benchmarks chosen to measure the state’s progress toward meeting its goal of balancing the LTSS system:

1. percent of public LTSS dollars spent on institutional versus community care for persons aged 65-plus;
2. percent of nursing home days that are for individuals with low acuity;
3. percent of Elderly Waiver and Alternative Care participants that are for individuals with high acuity; and
4. ratio of nursing home beds per 1,000 persons aged 65 or older.

The report concludes that the state made significant and steady progress toward meeting the balancing goals since 2001, when reforms were initiated. The Department updates this report on a biennial basis.

Steve Eiken and Lisa Gold, Thomson Reuters; Sheryl Larson, PhD, and K. Charlie Lakin, PhD, University of Minnesota Institute for Community Integration; “Minnesota State Profile Tool: An Assessment of Minnesota’s Long-Term Support System”; prepared for the Continuing Care Administration, Minnesota Department of Human Services; December 3, 2009. Accessed December 2012 at: http://www.dhs.state.mn.us/main/groups/aging/documents/pub/dhs16_144888.pdf.

The Minnesota State Profile Tool assesses the state’s progress toward balancing the LTSS system for greater reliance on HCBS and less on institutional care. It describes publicly funded LTSS programs, utilization, and expenditure trends. The report compares Minnesota Medicaid LTSS data with both neighboring states and the national average. The report includes a discussion of key components of a balanced delivery system and Minnesota initiatives to address each of the key components.

Nevada

State of Nevada Division of Health Care Financing and Policy; “State Profile Tool: Long Term Support Services”; March 2009. Accessed December 2012 at: <https://dhcfp.nv.gov/pdf%20forms/FactSheets/SPT-NEVADA%20FINAL%203-31-09.pdf>.

This report was developed through the Real Choices Systems Change grant to assess the state’s progress toward balancing LTSS through institutional and community settings between 2001 and 2007. During that time, Nevada’s population aged 65-plus grew 26.4 percent. The monthly average number of participants in HCBS waivers for seniors

grew 58 percent, and the nursing facility caseload decreased by 8.5 percent. The report discusses the difficulty of determining savings from the HCBS program. The report provides a comprehensive description of the delivery system for various populations including older adults and individuals with physical disabilities. The Appendices include a description of non-Medicaid LTSS in the state.

New Jersey

New Jersey Medicaid Long-Term Care Funding Advisory Council, Department of Health and Senior Services, Department of Human Services, and Department of the Treasury; "Independence, Dignity and Choice in Long-Term Care Act Annual Report"; prepared for the governor and legislature; 2010. Accessed December 2012 at: http://www.state.nj.us/health/senior/documents/ltc_mac_annualreport_2010.pdf.

This report is one in a series that tracks the success of the state in realigning its LTSS system to provide more community options, greater consumer choice, and maximum flexibility between receiving care in a nursing home or through community-based services. Pointing to their results from a budget projection model, the state reports a reduction in the growth of expenditures for nursing home care by transitioning or diverting individuals to HCBS. The model projected a cost avoidance of more than \$138 million between FY 2008 and FY 2011 due to balancing efforts.

Ohio

Shahla Mehdizadeh, Robert Applebaum, Ian M. Nelson, and Jane Straker; "Coming of Age: Tracking the Progress and Challenges of Delivering Long-Term Services and Supports in Ohio"; Scripps Gerontology Center, Miami University; June 2011. Accessed December 2012 at: http://www.scripps.muohio.edu/sites/scripps.muohio.edu/files/Coming_of_Age_Tracking_the_Progress_and_Challenges_%20June_2011.pdf.

This report documents findings from the Ohio Long-Term Care Research Project that has tracked Ohio utilization trends for institutional and HCBS since 1993. The analysis concludes that over 16 years, Ohio made significant shifts in delivering and funding LTSS. In spite of a 15 percent growth in the older population since 1997, the number of older people using nursing homes dropped by nearly 7,000. Between 1997 and 2009, the number of older individuals utilizing Ohio HCBS waivers increased from 14,168 to 30,388 (114 percent). The overall utilization rate for LTSS, however, remained nearly constant. The shift in utilization patterns for individuals aged 60 and older resulted in a \$100 million reduction of Medicaid expenditures from 1997 to 2009, calculated on 2009 dollar expenditure rates. The report includes enrollment; cost and utilization trends; demographic, social, and level of functioning characteristics of LTSS users; and addresses system capacity. The report concludes with recommendations for future policy priorities to address continued growth in the population needing LTSS.

Oklahoma

Robert Mollica, National Academy for State Health Policy; Maureen Booth and Edmond S. Muskie, School of Public Health, University of Southern Maine; Susan Reinhard, Center for State Health Policy, Rutgers University; Leslie Hendrickson, Consultant; “Home and Community Based Services in Oklahoma: A Systems Review”; conducted by the National Academy for State Health Policy, September 2005. Accessed December 2012 at: <http://muskie.usm.maine.edu/Publications/2005/HCBS-OK-Systems-Review.pdf>.

This review of Oklahoma’s LTSS system was produced under a grant received from CMS under the Real Choice Systems Change program. It assesses options for the state to improve the balance between HCBS and institutional LTSS. The first section of the report describes the state’s existing system, including enrollment, expenditure, and utilization trends and comparisons with other states; a description of the organizational structure and access avenues to services; and a description of quality management processes and performance expectations. The second section lays out a number of recommendations to improve the balance of services, streamline access to services, improve quality oversight, and further develop quality measures.

Oregon

Oregon Department of Human Services, Division of Seniors and People with Disabilities; “A Report on: Long-Term Care in Oregon”; September 2010. Accessed December 2012 at: <http://www.oregon.gov/DHS/spwpd/ltc/fltc/report1.pdf>.

This report describes initiatives designed to re-align Oregon’s LTSS system to create a sustainable system that can meet current and future demands. A key strategy is to decrease the percentage of the state’s budget spent on nursing facility care by investing in HCBS alternatives. Policy decisions, budgetary constraints, and enactment of a nursing facility provider tax in 2003 served to reverse the historic trend of declining nursing facility utilization. Medicaid nursing home caseloads grew during the first 12 months of the 2007–2009 biennium. In response to the shift in growth of nursing facility caseload, the state took action to refocus resources toward diverting or transitioning individuals from institutional settings to HCBS options. The report describes the state’s Money Follows the Person program, enhanced care coordination, and other efforts that support balancing.

Rhode Island

The Lewin Group; “An Independent Evaluation of Rhode Island’s Global Waiver”; December 6, 2011. Accessed December 2012 at: http://www.ohhs.ri.gov/documents/documents11/Lewin_report_12_6_11.pdf.

The purpose of this evaluation was to determine the impact of Rhode Island’s Global Waiver on Medicaid expenditures. Three areas of interest were evaluated:

1. the impact of LTSS delivery changes on enrollment, utilization, and cost of services and supports for older adults and adults with disabilities in HCBS settings and in institutions;
2. the effect of care management initiatives on Medicaid cost and health outcomes; and

3. progress toward state efforts to ensure “the right services, at the right time, in the right setting.”

The evaluation concluded that the Global Waiver was successful in balancing the LTSS system to greater reliance on HCBS with estimated savings of \$35.7 million over the 3-year period. In addition, an analysis of medical services utilization found improved access to physician services and lower emergency room use by individuals receiving care management, for estimated savings of about \$5 million in FY 2010, including individuals with disabilities and those with mental health disorders or chronic conditions. Findings were based on analysis of data pre- and post-implementation of the waiver, and through comparing costs to those in traditional fee-for-service delivery.

Rhode Island Executive Office of Health and Human Services; “Rhode Island Annual Medicaid Expenditure Report”; June 2011. Accessed December 2012 at: [http://www.dhs.ri.gov/Portals/0/Uploads/Documents/Public/Reports/RI Medicaid Expend SFY2010 FINAL.pdf](http://www.dhs.ri.gov/Portals/0/Uploads/Documents/Public/Reports/RI_Medicaid_Exp_SFY2010_FINAL.pdf).

The stated purpose of the expenditure report is to provide state policymakers with an overview of Medicaid expenditures to assist in “assessing and making strategic choices” about program cost, coverage, and efficiency in the annual budget process. The report includes enrollment, cost, and utilization trends for various Medicaid populations, including older adults. The state updates the budget report annually.

Rhode Island Department of Elderly Affairs (DEA); “Preliminary Findings: Summary of DEA Services Impact on the Entry of Clients to Rhode Island Nursing Homes”; December 31, 2009. No link found.

The report summarizes four studies completed under the Administration on Aging’s (AoA’s) Advanced Performance Outcomes Measure Project (POMP) grant to assess the impact of AoA programs in a manner that can be associated with cost. The analysis addresses the demographics, client program and service data, and client functional and clinical assessment data to determine the impact on older adults. In addition, a qualitative analysis helps to clarify findings in the quantitative studies. The report concludes that individuals residing in a nursing home who received DEA services prior to their entry are older on average than individuals residing in a nursing home that did not receive DEA services; and the services delay entry into a nursing home on average by 17 months for all clients, and by 23 months for clients at high risk. In addition, the highest risk factors for DEA service recipients include caregiver proximity, client age, and client mental status. Although the report notes that costs were avoided by comparing the average cost per month for nursing home clients with an average cost of DEA services for basic, intermediate, and high-intensity services, more analysis is needed to determine the specific (non-average) annual cost avoidance savings.

Dwight B. Brock, PhD; Beth Rabinovich, PhD; Jacqueline Severynse, BS; Robert Ficke, MA; “Risk Factors for Nursing Home Placement Among OAA Service Recipients: Analysis of Two Data Sets From the Rhode Island Department of Human Services”; Westat; U.S. Administration on Aging Contract No. 233-02-0087. No link found.

The evaluation used time-to-event analysis (e.g., time to nursing home placement) to determine whether the use of Older Americans Act (OAA) services serve to delay nursing home placement. Two sets of data from the Department of Elderly Affairs spanning different periods (December 1998 through December 2005; and January 2005

through September 2007) were used to conduct the analysis. The authors conclude that a statistically significant reduction in risk for nursing home placement is associated with increased number of OAA services received, controlling for demographics and functional status. No single type of service contributed directly to the decreased risk, but the total program of services was important to reducing risk.

Texas

Texas Legislative Budget Board Staff; “Expenditure and Caseload Trends for Long-Term Care in the Texas Medicaid Program”; pp. 223–228 in “Texas State Government Effectiveness and Efficiency: Selected Issues and Recommendations”; January 2009. Accessed December 2012 at: <http://www.lbb.state.tx.us/Government/Government%20Effectiveness%20and%20Efficiency%20Report%202009.pdf>.

This Legislative Budget Board staff report contains analyses on the effectiveness and efficiency of several areas of Texas state government. Established under statute, the periodic reports help the Texas Legislature identify and implement changes to improve state agency effectiveness and efficiency, assist with monitoring agency progress toward the achievement of established performance targets, and facilitate the accomplishment of state goals and objectives. The 2009 report assesses Medicaid LTSS caseloads and expenditures for institutions and community-based care in the state from 1999 to 2007. Findings include:

- Spending on community-based care has increased over time.
- Spending and caseloads for community-based care have grown at a faster rate than that for institutional-based care.
- Despite growth in expenditures for institutional-based care, the number of individuals served in this setting remained relatively unchanged.
- Significantly more clients have been served in Medicaid community-based care settings at lower total expenditures compared with Medicaid institutional-based care.
- The gap has widened between expenditures per client in Medicaid institution-based care and community-based care.
- Among new waiver clients from 1999 to 2007, 16 percent of clients with mental retardation and 55 percent of aged and disabled clients could have been served in institutions at the same level of expenditures. If all new waiver clients had been served in institutions during this timeframe, the state would have exceeded historical expenditures by \$2.6 billion.

Vermont

Cheryl Cumings, MA; Laney Bruner-Canhoto, PhD, MSW, MPH; Disability and Community Services: In cooperation with Bard Hill, Department of Disabilities, Aging, and Independent Living; “Vermont Choices for Care: Evaluation of Years 1–5: Final Report”; University of Massachusetts Medical School; June 2011. Accessed December 2012 at: <http://www.ddas.vermont.gov/ddas-publications/publications-cfc/evaluation-reports-consumer-surveys/vt-cfc-evaluation-years-1-5>.

This report evaluates Vermont’s Choices for Care Section 1115 waiver, designed to target adults with LTSS needs and to shift delivery of services and spending to community

services so that individuals have access to LTSS in the setting of their choice. The evaluation measures progress based on an evaluation plan that lays out various goals. Short-term goals (1–5 years) address information dissemination, access to care, effectiveness, experience with care, quality of life, the impact of the waiting list, and budget neutrality. Long-term goals (beyond 5 years) address public awareness of options and health outcomes. Using enrollment, utilization, expenditure, and waiting list trends, as well as client surveys, the evaluation shows Vermont has made steady progress toward its goals. The report concludes with a number of policy recommendations for continued progress.

Virginia

Jessica Kasten, Susan Raetzman, Steve Eiken, and Lisa Gold; “Virginia’s State Profile Tool: An Assessment of Virginia’s Long-Term Care System”; Thomson Reuters for the Virginia Department of Medical Assistance Services; June 30, 2009. Accessed December 2012 at: http://dmasva.dmas.virginia.gov/Content_atchs/rcp/rcp-prftool.pdf.

The profile was developed under a CMS Real Choice Systems Change grant to assess the state’s LTSS delivery system and to participate in developing national balancing indicators. The State Profile Tool provided the framework to assess the progress to balance from reliance on institutional LTSS to greater HCBS options. The report provided an overview of the LTSS system and expenditure and utilization trends. From 2004 to 2008, the proportion of individuals receiving HCBS increased from 38 percent to 49 percent. The report also described existing and planned initiatives to strengthen the LTSS delivery system, the administrative and organizational structure, and policy recommendations for future action.

West Virginia

Public Consulting Group; “‘Money Follows the Person’ and Long Term Care System Rebalancing Study; Executive Summary”; prepared for the Department of Health and Human Resources, Office of the Ombudsman for Behavioral Health, Olmstead Office; August 8, 2008. Accessed December 2012 at: <http://www.wvdhhr.org/oig/olmstead/rebalancing%20and%20mfp/rebalancing%20and%20mfp%20full%20length%20study%20report.pdf>.

This report documents an evaluation of West Virginia’s LTSS system and provides recommendations for implementing a Money Follows the Person (MFP) rebalancing initiative. The report provides fiscal projections and costs associated with the program, including potential cost avoidance and use of savings to balance the system toward community-based services. Modeling two scenarios for an MFP program—a conservative MFP program and an aggressive MFP program—the analysis projected savings from \$57 million to \$62 million over a 10-year period from transitioning 75 to 150 individuals from nursing facilities or institutional care to community-based services. In addition, the report provides an assessment of the existing LTSS system and recommendations around provider capacity, access, financing, and quality assurance and improvement.

Wisconsin

State of Wisconsin Department of Health Services; “SFY 2008 Report on Relocations and Diversions from Institutions as Required by s. 51.06(8)”; for the State Legislative Joint Finance Committee; December 22, 2008. Accessed December 2012 at: http://www.dhs.wisconsin.gov/bdds/icfmr/RelocationReport_08.pdf.

Required by statute, this report summarizes the state’s progress toward transitioning individuals residing in institutions to home and community-based care, and diverting at-risk individuals from entering nursing homes by assisting them to access HCBS. In FY 2008, the state estimated cost savings of \$4 million from relocating frail older adults and individuals with physical disabilities from nursing homes to the community. The report also describes initiatives and outcomes around quality and member safety.

Notes

¹ The MDS is a federally mandated assessment of all residents of Medicare/Medicaid certified nursing facility residents upon admission and at least quarterly thereafter.

² See N. Idegami, J.N. Morris, and B.E. Fries, “Low-Care Cases in Long-Term Care Settings: Variation among Nations,” *Age and Ageing* 26, no. 2 Supp. (1997): 67–71. And V. Mor, J. Zinn, P. Gozalo, Z. Feng, O. Intrator, and D.C. Grabowski, “Prospects for Transferring Nursing Home Residents to the Community,” *Health Affairs* 26, no. 6 (2007): 1762–1771.

³ For a summary of the project, see: <http://thescanfoundation.org/comprehensive-analysis-home-and-community-based-services-project>.

⁴ Although this study was published after the survey and literature review, the authors included it in this bibliography because it was the result of the multi-year project from CAMRI, from which they included their earlier reports. Subsequently, CAMRI released “Recipients of Home and Community-Based Services in California,” but it is intentionally not included in this bibliography because it focuses on the characteristics of California’s HCBS recipients rather than the costs or cost effectiveness of the services.

⁵ A. Shapiro, C. Loh, and G. Mitchell, “Medicaid Cost-Savings of Home and Community-Based Services Programs in Florida,” *Journal of Applied Gerontology* (2009) doi: 10.1177/0733464809348499.

⁶ At the time of publication, this website was under construction but expected to be back soon.

Appendix B. Quantitative and Qualitative Analysis of State Home and Community-Based Services Studies

State Reports (Date Published)	Quantitative Analysis							Qualitative Analysis						
	Reported Savings or Reduction in Growth	Cost Benefit Analysis Model	Enrollment ^a	Utilization ^b		Spending	Return on Investment	Client Satisfaction	Health Status	Health Outcome	Service Access & Capacity	Demographics	Social	
38	19	9	28	Medicaid 30	Older Americans Act Services 14	State/Other 15	33	2	5	17	5	19	27	16
Alaska (2011)	N/A		√	√			√						√	
Arkansas (Felix et al., 2011)	√	√		√			√	√					√	
Arkansas (Dept. of Human Services, 2008)	√						√		√				√	
California (Mollica et al., 2009)	√		√	√		√	√					√	√	
California (Newcomer et al., 2011)	N/A		√	√			√		√			√	√	
California (Stone et al., 2011)	N/A													
California (Newcomer, et al., 2012)	N/A		√	√		√	√						√	
Connecticut (2009–2010)	√	√	√	√	√	√	√		√	√	√		√	√

State Reports (Date Published)	Quantitative Analysis						Qualitative Analysis						
	Reported Savings or Reduction in Growth	Cost Benefit Analysis Model	Enrollment ^a	Utilization ^b		Spending	Return on Investment	Client Satisfaction	Health Status	Health Outcome	Service Access & Capacity	Demographics	Social
Florida (Dept. of Elder Affairs, 2009)	N/A		√	√	√	√		√			√	√	√
Florida (Shapiro et al., 2010)	√	√		√	√	√			√			√	√
Georgia (Dept. of Audit and Accounts, 2008)	√		√	√		√							
Georgia (Myers and Stauffer, 2006)	√	√		√		√	√		√			√	√
Iowa (2009)	N/A		√	√	√	√					√	√	
Indiana (2009–2010)	N/A		√		√	√			√			√	√
Kansas (2007)	√			√	√	√			√			√	√
Maine (Fralich et al., 2010)	N/A		√	√		√			√	√	√	√	√
Maine (Griffen et al., 2009)	N/A			√	√	√					√	√	

State Reports (Date Published)	Quantitative Analysis						Qualitative Analysis					
	Reported Savings or Reduction in Growth	Cost Benefit Analysis Model	Enrollment ^a	Utilization ^b	Spending	Return on Investment	Client Satisfaction	Health Status	Health Outcome	Service Access & Capacity	Demographics	Social
Maryland (Dept. of Aging, 2011)	N/A		√	√	√	√				√		
Maryland (Hilltop Institute, 2011)	√		√	√		√	√	√				
Massachusetts (O'Connor et al., 2009)	√					√				√	√	
Massachusetts (UMass Medical School, 2010)	N/A		√	√		√		√		√	√	√
Michigan (2009)	N/A		√	√	√	√				√	√	√
Minnesota (Dept. of Human Services, 2010)	√		√	√	√	√	√		√	√	√	√
Minnesota (Eiken et al., 2009)	N/A		√	√	√	√				√	√	√
Nevada (2009)	√		√	√		√				√	√	

State Reports (Date Published)	Quantitative Analysis					Qualitative Analysis							
	Reported Savings or Reduction in Growth	Cost Benefit Analysis Model	Enrollment ^a	Utilization ^b	Spending	Return on Investment	Client Satisfaction	Health Status	Health Outcome	Service Access & Capacity	Demographics	Social	
New Jersey (2010)	√	√	√	√	√						√	√	
Ohio (2011)	√	√	√	√	√			√	√	√	√	√	
Oklahoma (2005)	N/A		√	√	√					√			
Oregon (2010)	N/A		√	√						√			
Rhode Island (The Lewin Group, 2011)	√	√	√	√	√			√	√				
Rhode Island (Brock et al., 2007)	N/A	√			√			√			√	√	
Rhode Island (Dept. of Elderly Affairs, 2009)	√				√	√		√			√		
Rhode Island (Executive Office of Health and Human Services, 2011)	N/A		√	√	√			√					

State Reports (Date Published)	Quantitative Analysis					Qualitative Analysis						
	Reported Savings or Reduction in Growth	Cost Benefit Analysis Model	Enrollment ^a	Utilization ^b	Spending	Return on Investment	Client Satisfaction	Health Status	Health Outcome	Service Access & Capacity	Demographics	Social
Texas (2009)	√		√		√							
Vermont (2011)	N/A		√	√			√	√		√		√
Virginia (2009)	N/A		√	√	√	√				√	√	
West Virginia (2008)	√	√	√		√					√		
Wisconsin (2008)	√		√	√	√			√			√	√

^a **Enrollment** refers to the number of individuals that are enrolled in home and community-based services and are eligible to use services. Quantitative analysis may include aggregate enrollment data, or may use enrollment into specific programs or research cohort groups.

^b **Utilization** refers to data about the number of units or types of services used. Enrolled individuals may use multiple services (or no services) over a specified period.