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Martin Kitchener, Terence Ng, Nancy Miller & Charlene Harrington

Manuscript for *Journal of Health and Social Policy*: 15 August, 2005

Martin Kitchener PhD, Associate Adjunct Professor (Corresponding author)

Department of Social and Behavioral Sciences
University of California, San Francisco
3333 California Street, Suite 455
San Francisco, CA 94118
Tel: (415) 502-7364
Fax: (415) 476-6552
Email: martin.kitchener@ucsf.edu

Terence Ng MA, Research Associate

Department of Social and Behavioral Sciences
University of California, San Francisco
3333 California Street, Suite 455
San Francisco, CA 94118
Tel: (415) 502-6330
Fax: (415) 476-6552
Email: terence.ng@ucsf.edu

Nancy Miller PhD, Associate Professor

Department of Public Policy
University of Maryland, Baltimore County
1000 Hilltop Circle
Baltimore, MD 21250
Tel: (410)455-3889
Fax: (410)455-1172
Email: Nanmille@umbc.edu

Charlene Harrington PhD, Professor

Department of Social and Behavioral Sciences
University of California, San Francisco
3333 California Street, Suite 455
San Francisco, CA 94118
Tel: (415) 476-4030
Fax: (415) 476-6552
Email: charlene.harrington@ucsf.edu

Acknowledgements

This research was funded in part by the Kaiser Commission on Medicaid and the Uninsured (Grant # 00-1355C) and the National Institute for Disability and Rehabilitation Research (Grant # H133B031102). The views expressed in the paper do not necessarily reflect those of either sponsor.

Abstract

As long-term care policy makers struggle with competing challenges including state budget deficits and pressures to expand home and community-based services (HCBS), there is a pressing need for information on the comparative cost of Medicaid HCBS and institutional care. This paper uses the most recent available data (2002) to present three per participant expenditure comparisons between Medicaid HCBS waivers (which require that participants have an institutional level of care need) and institutional care: 1) *program* expenditure (waivers vs. the comparable level of institutional provision); 2) *total Medicaid* expenditure (program plus other Medicaid expenditure); and 3) *estimated total public* expenditure (Medicaid expenditures plus state and federal supplemental income payments). This analysis estimates that when compared with Medicaid institutional care in 2002, HCBS waivers produced a national average public expenditure saving of \$43,947 per participant.

Key Words

Medicaid Home and Community Based Waivers, Public Cost Savings, Long Term Care

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In 2002, the federal-state Medicaid program was the second largest budget item for many states and paid for an estimated 67 percent of the nation's \$87.9 billion in total public long-term care (LTC) spending (Levit et. al., 2004; National Association of State Budget Officers [NASBO], 2002). Although institutional provision (e.g., nursing homes) consumed 69 percent of Medicaid LTC expenditures, pressures including public demand and the 1999 *Olmstead* Supreme Court decision require that states expand alternative home and community-based services (HCBS) (Eiken, Burwell & Schaefer, 2004; Kitchener &, 2004). With 43 states reporting budget deficits in 2003 (Boyd, 2003; Kaiser Commission on Medicaid & the Uninsured, 2003), the President's New Freedom Initiative (NFI) and the National Governors Association initiative on LTC underscore the pressing need for information on the comparative public costs of Medicaid HCBS and institutional care (National Governors Association [NGA], 2004).

Previous studies of Medicaid LTC have examined issues including program innovations (Wiener et. al., 2001), participant and expenditures trends (Eiken et. al., 2004; Kitchener, Ng and Harrington 2005), and evidence that HCBS increase the satisfaction of clients and informal caregivers (Wiener, Tilly & Alexih, 2002). Very few studies have attempted to compare the costs of Medicaid HCBS and institutional care (Alexih, Lutzky, & Corea, 1996; Grabowski, 2004).

This paper analyzes the most recent national (2002) state-reported data on the costs of Medicaid institutional LTC and the Medicaid 1915(c) HCBS waiver programs that require participants to meet states' institutional care need criteria in order to be

eligible for services. Three annual per participant expenditure comparisons are estimated and presented here. First, Medicaid waiver ‘program expenditures’ are compared with states’ estimates of institutional care expenditures for each of three institutional levels of care: (1) nursing facilities, (2) intermediate care facilities for the mentally retarded/developmentally disabled (ICF-MR/DD), and (3) acute care hospitals. Second, ‘total Medicaid’ per participant expenditures on institutional care and waivers are compared by adding to the direct program expenditures, all other Medicaid expenditures (e.g. hospital, physician, prescription drugs). Finally, ‘total public’ expenditures on Medicaid institutional and waiver participants are compared. Because Medicaid institutional expenditures include room and board costs that are excluded for HCBS waiver programs, total public expenditures for waiver programs are estimated by adding to the Medicaid costs, the value of state and federal supplemental income payments (the major source of payment for accommodation).

This paper presents two contributions to understandings of relative per participant public expenditures on Medicaid HCBS waivers and institutional care. First, our findings confirm and elaborate significant variations in per participant public cost profiles of different waiver target groups (e.g., elderly and disabled). Second, this study estimates that when compared with Medicaid institutional care in 2002, HCBS waivers produced a national average public expenditure saving of \$43,947 per participant. This study does not attempt to examine whether waiver programs save states money overall because that depends on factors that could not be modeled here (including the ‘woodwork effect’ hypothesis that expanding HCBS increases total costs because of new enrollments by people who are eligible for institutional services but who would never go into an

institution). That said, the analytical approach developed in this study may provide a basis for investigations of that issue and studies of longitudinal trends.

Medicaid LTC Expenditures

State Medicaid LTC programs are mandated to provide institutional care and home health services for participants entitled to institutional care (Harrington et. al., 2000). States can also provide Medicaid HCBS through the optional state plan personal care benefit (not considered here) and 1915(c) HCBS waivers. Authorized under section 1915(c) of the *Social Security Act*, the Medicaid HCBS waiver program allows the Centers for Medicare & Medicaid Services (CMS) to waive two Medicaid statutory requirements ('state-wideness' and comparability of services) to allow states to provide medical (e.g., nursing) and non-medical services (e.g., personal care and homemaker) to persons eligible for one of three levels of institutional LTC: nursing homes, intermediate care facilities for the mentally retarded/developmentally disabled (ICF-MR/DDs), and hospitals (Bogart et. al., 1997; Harrington et. al., 2000).

To encourage states to expand HCBS waivers as an alternative to institutional care, Medicaid provides states with federal-matched funding and mandates the use of two cost controls for every waiver: (1) enrollment caps, and (2) annual reports of Medicaid cost neutrality demonstrating that per participant annual waiver expenditures do not exceed per participant annual expenditures at a specified level of institutional care. Medicaid allows states further discretion to control waiver expenditures by setting financial eligibility criteria and by specifying the target group served, services provided, and geographic coverage.

Figure 1

Although most states steadily increased Medicaid HCBS waiver expenditures through 2002 (at a faster rate than home health and personal care), institutional spending continued to both consume the bulk of Medicaid LTC expenditures and grow at a rate higher than inflation (Figure 1). In this context, the relative public cost of Medicaid HCBS waivers and institutional care is of significant concern to policymakers. However, the evidence-base is dated, limited, and inconclusive (Chappell, 1992; Chappell et. al., 2004; Feder, Komisar & Niefeld, 2000; Kane, 1999; Shaughnessy, 1985).

Early comparisons conducted in the 1980s suggested that because participants in HCBS demonstration projects might not have entered institutions, HCBS alternatives added to total public expenditures (Berkeley Planning Associate [BPA], 1985; Doty, 2000; Hedrick & Inui, 1986; Kemper, 1988; Mathematica Policy Research Inc [MPR], 1986; Vertrees, Manton & McDowell, 1989; Weissert, Cready & Pawelak, 1988).

Concern for this so-called ‘woodwork effect’ of HCBS dominated policy discourse even though a few studies the mid-1990s began to report that HCBS programs could be cost effective, especially when supported by administrative (cost control) techniques such as targeting, specified eligibility criteria, and screening (Alexih et. al., 1996; Greene, Ondrich & Laditka, 1998; Hux et. al., 1998; Ostbye & Crosse, 1994; Prouty & Lakin, 1998; US General Accounting Office [GAO], 1996; Skellie et. al., 1983; Weissert et. al., 1997).

Reviews of these studies highlight four factors that have complicated previous attempts to assess the public cost efficiency of HCBS (Weissert, 1985; Kane, 1999; Doty, 2000). First, Medicaid HCBS are often provided in addition to other public-funded services (e.g., housing), but comparisons with institutional care expenditures are limited

by available data on these other public programs (Clinkscale & Vertrees, 1986). Second, expenditure profiles vary within and across LTC target groups (e.g., aged, severely disabled) in part because of variations in the level of institutional care needed (Fox & Kim, 2004; Harrington et. al., 2001; Knobbe et. al., 1995; Mueser et. al., 1998; Prouty & Lakin, 1998). For example, ICF-MR/DD and hospital care are substantially more expensive than nursing facility care but often studies do not make distinctions between these levels of care. (Note that some individuals receive long term care in hospitals, such as those who are on ventilators, because nursing facilities are often unwilling to take individuals with high-intensity care needs).

Third, some states have shifted expenditures from state-only programs to federally-matched Medicaid programs to increase the federal Medicaid program costs. Estimates of HCBS waiver expenditures may not account adequately for program overheads (e.g., screening and assessment) and the other Medicaid services used by waiver participants such as state plan home health and personal care services (Doty, 1986; Greene et. al., 1998). Finally, examinations of LTC expenditures typically fail to take into account the substantial care provided by family and friends (Feder et. al., 2000). For recent exceptions, see Chappell et al., 2004; LaPlante et. al., 2004; Max, Weber & Fox, 1995).

While recent studies provide information on issues including initiatives such as Cash and Counseling and managed LTC, aggregate Medicaid program expenditures and inter-state variation, no empirical study has concentrated on the state-reported cost neutrality/savings of HCBS waiver program (Eiken et. al., 2004; Grabowski, 2004; Miller, 2004; Schwab et. al., 2003). This study combined program data for all waivers in

2002 with supplemental income data (to account for room and board costs) to compare HCBS waiver participant expenditures and with institutional LTC expenditures by target group and by level of care.

Study Design and Methods

Sample. This study used individual Medicaid 1915(c) HCBS waiver programs as the unit of analysis, with annual data analyzed for the most recent reported year (2002). The state of Arizona is excluded from this study because it operates its Medicaid LTC program under a unique statewide 1115 demonstration waiver.

Data Sources. This study conducted descriptive analyses on a dataset comprising the annual CMS Form 372s used by states to report unduplicated participant and expenditure data for each waiver. Since 1994, the authors have collected these reports annually from state officials using repeated requests by email, fax and/or telephone. The present analysis was conducted on the subset of 2002 reports. As a result of requests through October 2004, the reported dataset comprised 241 of the 252 total reports for that year.

In 2005, as in previous years, the following CMS Form 372 data for each waiver were coded using a standard protocol and entered into an Excel database: (1) unduplicated waiver participants and expenditures; (2) the level of institutional care provided (nursing home, ICF-MR/DD, hospital); (3) the demonstration of Medicaid cost neutrality (see below); and (4) the waiver target group (children, aged/disabled, HIV/AIDS, Mentally Retarded/Developmentally Disabled [MR/DD], Traumatic Brain and Spinal Cord Injury [TBI/SCI]).

The basis for the cost comparisons reported here is the waiver cost-neutrality formula reported in the CMS Form 372s (US Department of Health & Human Services [HHS], 2000). States use this formula to demonstrate that annual per participant Medicaid waiver expenditures do not exceed the state estimated per participant Medicaid expenditures for the comparable level of institutional care (for formula specification and details see Appendix 1). Missing data were estimated using two methods. For the 11 CMS Waiver Form 372 reports missing from our 2002 dataset, estimated figures were produced by inflation-adjusting 2001 data. In the absence of cost neutrality data in waiver reports from previous years (19 in 2002), estimates were produced using the 2002 annual national average figures for waivers that provided services to the same target group at the same level of care.

Analysis. The following three *per participant expenditure* comparisons were conducted between waivers and the stated level of institutional care provision: (1) ‘program’ (e.g., waiver vs. nursing home), (2) ‘Medicaid’ (program costs plus other Medicaid expenditures such as physician, and prescription drug costs), and (3) ‘estimated total public’ (Medicaid costs plus an estimate of room and board costs using Supplemental Security Income/State Supplemental Payments (SSI/SSP)).

The first two sets of per participant cost comparisons (program and Medicaid) were conducted using data reported on the CMS Form 372, coded by waiver target group and level of care. Because the reported Medicaid institutional expenditures include room and board but waivers do not, our comparison of the public cost of the two programs required estimation of the ‘other’ public expenditures for waiver participants paid by federal, state or sub-state (e.g., city, county) programs for items such as room and board.

SSI/SSP payments are the major source of public funding for these expenses (Doty, 2000; Alecxih et. al., 1996; US GAO, 1996). Thus, we added to the per person Medicaid waiver expenditures, the value of SSI/SSP payments paid to persons living independently net of the value of SSI/SSP ‘personal needs’ payments to institutionalized persons (for formula, see Appendix 2).

From 2002 Social Security Administration data (SSA 2002), it was established that the following annual federal per person SSI payments were standard nationally: \$6,540 for participants living independently and \$360 for institutionalized persons. Thus, as an estimate of the additional federal (public) cost of waiver participants, the net figure (\$6,180) was added to the per participant waiver expenditures. To estimate the net value of SSP payments made to waiver participants, four estimation methods were required because of variation in state programs (see Appendix 3). Each method involved doubling the SSP figures of states that provide SSP to persons living independently to account for other benefits that a recipient may receive from the state (e.g. nutritional subsidies). The products of these calculations were then added (to the total calculated totals of Medicaid costs and SSI payments) to compare the per participant public costs of HCBS waiver and institutional participants.

Results

Annual per Participant Program and Total Medicaid Expenditures on HCBS Waivers and Institutions, by Level of Care, 2002

[Figure 2]

Given the federally-mandated Medicaid cost neutrality requirement for HCBS waivers, it is not surprising that per participant program expenditures in 2002 were lower

for all Medicaid waivers when compared with institutional programs of the comparable level of care (Figure 2). However, the magnitude of the differences is noteworthy. For example, the national average per participant nursing facility waiver program expenditures of \$15,784 were 63 percent lower than the comparable average per participant nursing facility expenditures of \$42,292.

This analysis provides confirmatory evidence that per participant program expenditures for both Medicaid HCBS waivers and institutional participants with hospital and ICF-MR/DD levels of care need far outstripped those of participants with a (lower) nursing facility level of care need (Figure 2). Somewhat more surprising is the magnitude of the difference between Medicaid waiver expenditures for participants with an ICF-MR/DD level of care (70 percent lower than ICF-MR/DD expenditures), and for Medicaid waiver participants with a hospital level of care need (84 percent lower than hospital expenditures).

Two further noteworthy findings emerge from the examination of the total Medicaid expenditures resulting from serving LTC participants on waivers and in institutions. First, ‘other Medicaid’ (non-waiver program) expenditures for hospital-level waivers account for 54 percent of the total Medicaid expenditures on these waivers and 43 percent of Medicaid expenditures on nursing facility waivers (Figure 2). Second, and by contrast, ‘other Medicaid’ non-waiver program expenditures represent 26 percent of total Medicaid expenditures for ICF-MR/DD waiver participants. Moreover, average ‘other Medicaid’ non-program expenditures on LTC hospital participants were \$6,725 greater than for waiver participants provided with the equivalent level of care.

Annual per Participant Program and Total Medicaid Expenditures on HCBS Waivers and Institutions, by Target Group, 2002

[Figure 3]

Not surprisingly, reported per participant program expenditures are lower for Medicaid waivers serving every target group when compared with state-estimated program expenditures for institutions at the same level of care (Figure 3). That said, the \$142,976 difference in average per participant expenditures between HCBS waivers and institutional LTC for children is, at the very least, worthy of targeted investigation.

As with the earlier comparison by level of care, important findings emerge from our comparison by target group, of total Medicaid expenditures on waivers and in institutions. For all target groups except TBI/SCI, 'other' Medicaid expenditures were higher for waivers participants than for institutional care. For TBI/SCI participants, Medicaid pays a national average of \$1,956 more per institutionalized person in 'other' expenditures than it does for HCBS waiver participants. However, non-waiver program Medicaid expenditures for HIV/AIDS (\$19,381) participants and children's (\$39,282) waiver participants respectively represent 78 percent and 64 percent of the total Medicaid expenditures.

Estimated Annual Average of Total Public Expenditures on Waiver Participants, 2002

[Figure 4]

Using the estimation approach described earlier, which estimated the room and board costs from SSI/SSP for waiver participants, the national annual average total public expenditures on each waiver participant was \$42,713 in 2002 (Figure 4). Of this total,

Medicaid paid \$35,434 (83 percent) per participant in program and other expenditures, while other public sources (SSI/SSP) are estimated to have paid \$7,279 (17 percent).

Estimated Annual Public Savings Arising From Medicaid Waivers, by Level of Care, 2002

[Figure 5]

In 2002, Medicaid HCBS waivers at every level of care produced estimated public expenditure savings (at varying levels) for individual participants when compared with state estimates of comparable institutional provision.

Estimated Annual Public Savings Arising From Medicaid Waivers, by Target Group, 2002

[Figure 6]

In 2002, children's waivers were the most publicly cost efficient waiver while MR/DD and TBI/SCI waivers also produced public savings above the national average of \$43,947. Multiplying the estimated annual per participant public expenditure savings by the 2002 waiver target group population produces an estimated \$21.3 billion in national savings for MR/DD participants, \$8.1 billion in national savings for aged/disabled waiver participants, and \$1.52 billion saved from the AIDS/children and TBI/SCI waiver target groups.

Discussion and Conclusions

With LTC policy makers struggling to meet the challenges of fiscal crisis, pressures to maintain institutional spending and expand Medicaid HCBS waivers, there is a pressing need for information on relative program expenditures, expenditures to

Medicaid, and public expenditures. This paper presented two main sets of findings from a comparative analysis of the most recent national (2002), state-reported data on the per participant costs of Medicaid institutional LTC and Medicaid 1915(c) HCBS waivers. First, the findings presented here elaborate existing knowledge of variation in per participant cost profiles of different waiver target groups (e.g., elderly and disabled). Of some significance to policy discussions is the huge (\$142,976) reported difference in average per participant expenditures between HCBS waivers and institutional LTC for children. This finding that children's waivers offer the greatest opportunity for savings to Medicaid may be useful in decisions regarding priority setting in program development.

Second, this study estimates that when compared with Medicaid institutional care in 2002, HCBS waivers produced a national average public expenditure saving of \$43,947 per participant. This study could not systematically examine whether waiver programs saved states money overall in 2002 because that depends on factors (including the woodwork effect) that could not be modeled here. That said, multiplying the estimated per participant savings figure by the 2002 total waiver population (920,833) produces a liberal estimate of the total public cost saving of waivers to be \$40 billion. In a more conservative estimate, transitioning the 165,276 nursing facility residents who expressed a preference to return to the community in CMS (2005) survey, into waivers with a comparable level of care would produce an annual public saving of \$2.6 billion.

The savings from waiver programs estimated here warrant consideration from policy-makers who are considering expanding existing waivers and developing new ones to address unmet need for HCBS (Kitchener et al., 2004). The pressure on policy-makers to consider these options is likely to increase from developments including litigation

against states following the *Olmstead* decision and the President's NFI which includes the goal of transitioning institutionalized persons into community settings (The White House, 2002).

While this analysis presents a contribution towards the problematic task of comparing public expenditures on Medicaid HCBS waiver and institutional participants, there remain at least six issues. First, the basis of this comparison is the CMS Form 372 demonstration of mandated waiver cost neutrality. While we believe these to be the best available data, we acknowledge that there is a strong incentive (federal-matched funding) for states to 'manage' these reports by 'over-reporting' expenditure savings. Although the 372 reports are submitted annually to CMS for verification, other than analyzing actual claims data by state, there is no way to determine the accuracy of the data.

Second, one feature of this analysis is that it compares the per participant costs of specified institutional care (e.g., nursing homes, hospitals) programs with those of alternative HCBS program requiring that recipients meet at least the same level of institutional care need. That said, it has been claimed that some waiver programs enroll participants who have lower need levels than individuals in institutional care. It is known that the level of need criteria and the screening criteria do vary considerably by waiver within and across states. However, it also known that some states operate more stringent eligibility criteria for waivers than for institutional care (Kitchener, Ng & Harrington, 2004). As an area for future targeted research we recognize this issue and note also that individual assessment data for institutional and waiver participants within states would be needed in order to examine the issues of comparability of needs.

Third, our procedure for estimating other public expenditures on waiver participants (using net supplemental income calculations) involved two liberal proxies of ‘other state and sub-state expenditures’ on waiver participants: (1) doubling the SSP figures of states that provide SSP to persons living independently, and (2) using the national SSP average figure for the 26 states that do not provide SSP to persons living independently. That said, the approach lacks some precision and it may still be claimed that this method understates total public expenditures (such as housing benefits, food stamps, Older Americans Act funds, and Medicare). Still, the approach presented here represents an improvement on what has preceded it and provides a good basis from which further analyses can build.

Fourth, concentrating on the total public expenditures involved with Medicaid LTC, the estimation of the informal cost of care provided to both waiver and institutional participants was beyond the scope of this analysis. This represents another critical issue for further research. We note, however, that a recent Canadian study of senior care reported that HCBS is less costly than institutional care even when informal caregiver time is valued at both minimum and replacement wage (Chappell et. al., 2004). The complex relationship between LTC and informal care needs greater study in order to control for these costs in any estimation models for cost effectiveness.

Fifth, the cost estimates presented in this paper are for waiver participants compared with institutionalized participants. The cost saving is an estimate for waiver participants who would otherwise go into an institution. Of course, some individuals would probably not go into an institution even if the waiver services were not available. Rather, family members and friends may provide informal services or purchase LTC

services privately to prevent institutionalization. There is no way to estimate the extent to which this would occur within this study.

Finally, even though we estimate that individual waiver participants presented cost savings to Medicaid in 2002 when compared with institutional participants, the cost of providing more HCBS wavier slots could increase total state Medicaid expenditures because of increased demand (the woodwork effect). Only if states are able to institute effective targeting and screening programs for HCBS waivers (ensuring admission only to individuals who would otherwise be institutionalized) will these programs offer ‘real’ public expenditure savings. However, with the possible exception of states such as Washington, most states do not appear to have good preadmission screening programs or programs that divert individuals from institutional care (Tonner and Harrington, 2004). There is a pressing need for research that identifies and disseminates better practices and policies concerning this issue.

In addition to effective screening for HCBS programs, the achievement of efficiency saving will require that states institute strict controls over their institutional beds to ensure that only individuals with high levels of needs and those who could not otherwise be cared for at home are admitted. Although efforts to shift Medicaid resources from institutional to HCBS services are moving slowly (Eiken et. al., 2004), programs to transition individuals from institutional to HCBS care have begun and states with stronger certificate-of-need programs for nursing homes have been shown to be able to achieve a greater shift from institutional to HCBS programs (Miller et. al., 2002).

Despite the findings presented here, there is little doubt that progress towards expanding HCBS will continue to be impeded by influential economists who ensure that

the posited ‘woodwork effect’ is a major concern of those policy makers already worried about waiting lists for HCBS waivers. There is, therefore, a clear need to establish an evidence base concerning the potential demand for, and relative costs of, additional waiver services. In the absence of such evidence, political opponents of expanding HCBS (e.g., the nursing home industry) will continue to present the ‘woodwork effect’ hypothesis as a barrier to achieving the policy goal of meeting consumer demand for Medicaid HCBS waivers.

REFERENCES

Alecxih, L., Lutzky, S., & Corea, J. (1996) *Estimated Cost Savings From the Use of Home and Community-Based Alternatives to Nursing Facility Care in Three States*. Washington DC: Public Policy Institute/AARP.

Berkeley Planning Associates (BPA) (May 1985), *Evaluation of Coordinated Community-Oriented Long-Term Care Demonstration Projects: Final Report to the Health Care Financing Administration*, contract # 500-80-0073. Berkeley, CA: BPA.

Bogart, V.J., Chiplin, A.J., Gottich, V., & Stein J.A. (1997), Legal Issues in Securing Home Health Services Under Medicare and Medicaid. *Clearinghouse Review* Sept-Oct, 199-210.

Boyd, D.J. (2003). The Bursting State Fiscal Bubble and State Medicaid Budgets. *Health Affairs*, 22:1, 46-61.

Center for Medicare and Medicaid Services (CMS). 2005. 4th quarter, 2002 Minimum Data Set. Accessed March 24 from www.cms.hhs.gov

Chappell, N.L. (1992) *Social Support and Aging*. Vancouver, BC: Butterworths.

- Chappell, N.L., Havens, B., Hollander, M.J., Miller, J.A., & McWilliam, C. (2004) Comparative Costs of Home Care and Residential Care. *The Gerontologist* 44:3, 389-400.
- Clinkscale, R.M. and Vertrees, J.C. (1986) *Evaluation of Medicaid Section 2176 Home and Community Waivers. Final Report to Health Care Financing Administration*, contract # 500-83-0056. Columbia, MD: La Jolla Management Corp.
- Doty, P. (2000) *Cost Effectiveness of Home and Community-Based Long-Term Care Services*. Washington DC: US Department of Health & Human Services.
- Eiken, S., Burwell, B., & Schaefer, M. (2004) *Memo on Medicaid Long-Term Care Expenditures, FY 1998 through FY 2003*. Cambridge, MA: The MEDSTAT Group.
- Feder, J., Komisar, H.L., & Niefeld, M. (2000) Long-Term Care in the United States: An Overview *Health Affairs* 19:3, 40-56.
- Fox, M.H. and Kim, K.M. (2004) Evaluating a Medicaid Home and Community-Based Physical Disability Waiver *Family and Community Health* 27:1, 37-51.
- Grabowski, D. (2004) *The Cost-Effectiveness of Home-and Community-Based Long-Term Care Services: Review and Synthesis of the Most Recent Evidence*. Center for Home Care Policy & Research Policy Brief. New York: Visiting Nurse Service of New York.
- Greene, V.L., Ondrich, J., & Laditka, S. (1998) Can Home Care Services Achieve Cost Savings in Long-Term Care for Older People? *Journal of Gerontology: Social Sciences* 53B:4, S228-S238.
- Harrington, C., LaPlante, M., Newcomer, R., Bedney, B., Shostak, S., Summers, P., Weinberg, J., & Basnett, I. (2000) *A Review of Federal Statutes and Regulations for*

Personal Care and Home and Community Based Services: A Final Report. San Francisco: UCSF Department of Social and Behavioral Sciences.

Harrington, C., Carrillo, H., Wellin, V., Norwood, F., & Miller, N. (2001) Access of Target Groups to Home and Community Based Waiver Services. *Home Health Care Services Quarterly* 20:2, 61-80.

Hedrick, S.C., and Inui, T. (1986) The Effectiveness and Cost of Home Care: An Information Synthesis *Health Services Research* 20:6, 851-880.

Hux, M.J., O'Brien, B.J., Iskedjian, M., Goeree, R., Gagnon, M., & Gauthier, S. (1998) Relation Between Alzheimer's Disease and Costs of Caring. *Canadian Medical Association Journal* 159:5, 457-465.

Kaiser Commission on Medicaid and the Uninsured (2003) *Medicaid Spending Growth: A 50-State Update for Fiscal Year 2003.* Washington DC: The Kaiser Family Foundation.

Kane, R.L. (1999) Examining the Efficiency of Home Care. *Journal of Aging and Health* 11:3, 322-340.

Kemper, P. (1988) The Evaluation of the National Long-Term Care Demonstration: Overview and Findings. *Health Services Research* 23:1, 161-174.

Kitchener M., and C. Harrington. 2004. "U.S. Long-term Care: A Dialectic Analysis of Institutional Dynamics." *Journal of Health and Social Behavior* 45 (Extra issue): 87-101.

Kitchener, M., Ng, T., & Harrington, C. (2004) Medicaid 1915(c) Home and Community-Based Services Waivers: A National Survey of Eligibility Criteria, Caps, and Waiting Lists. *Home Health Care Services Quarterly* 23:2, 55-69.

Kitchener, M., T. Ng, & Harrington, C. (2005) Medicaid Home and Community-Based Services: National Program Trends. *Health Affairs* 24:1, 206-212.

Knobbe, C., Carey, S., Rhodes, L., & Horner, R. (1995) Cost-Benefit Analysis of Community Residential Versus Institutional Services for Adults with Severe Mental Retardation and Challenging Behaviors. *American Journal of Mental Retardation* 99:6, 552-568.

LaPlante, M., Kaye, S., Kang, T., & Harrington, C. (2004) Unmet Need for Personal Assistance Services: Estimating the Shortfall in Hours of Help and Adverse Consequences. *Journals of Gerontology: Social Sciences* 59B:2, S98-S108.

Levit, K., Smith, C., Cowan, C., Sensenig, A., Catlin, A., & the Health Accounts Team (2004), Health Spending Rebound Continues in 2002. *Health Affairs*, 23:1, 147-159.

Mathematica Policy Research Inc (MPR) (May 1986), *The Evaluation of the National Long-Term Care Demonstration: Final Report to the Health Care Financing Administration*. Princeton, NJ: MPR.

Max, W., Weber, P., & Fox, P. (1995) Alzheimer's Disease, the Unpaid Burden for Caring. *Aging and Health* 7, 179-199.

Miller, N. (2004) *Strategies to Support HCBS*. Center for Home Care Policy & Research Policy Brief.

Miller, N.A., Harrington, C., Ramsland, S., and Goldstein, E. (2002). State Policy Choices and Medicaid Long-Term Care Expenditures. *Research on Aging* 24 (4), 413-444.

Mueser, K.T., Bond, R., Drake, R., & Resnick, S. (1998) Models of Community Care for Severe Mental Illness: A Review of Research on Case Management.

Schizophrenia Bulletin 24:1, 37-74

National Association of State Budget Officers (NASBO) (2002). *2001 State Expenditure Report*. Washington DC: NASBO

National Governors Association (NGA) (6 July 2004), *NGA to Assist States Develop Community-Based Care Options at Policy Academy*. Press Release.

Ostbye, T. and Crosse, E. (1994) Net Economic Costs of Dementia in Canada. *Canadian Medical Association Journal* 151:10, 1457-1464

Prouty, R.W. and Lakin, K.C. (1998) *Residential Services for Persons with Developmental Disabilities: Status and Trends through 1997*. Minneapolis: University of Minnesota, Research and Training Center on Community Living/Institute on Community Integration

Schwab, T.C., Leung, K.M., Gelb, E., Meng, Y.Y., & Cohn, J. (2003) Home-and Community-Based Alternatives to Nursing Homes: Services and Costs to Maintain Nursing Home Eligible Individuals at Home. *Journal of Aging and Health* 15:2, 353-370.

Shaughnessy, P. (1985) Long-Term Care Research and Public Policy *Health Services Research* 20:4, 489-499.

Skellie, A., Favor, F., Tudor, C., & Strauss, R. (1983) The Georgia Alternative Health Services Project: Cost-Effectiveness Depends on Population Selection. *Home Health Care Services Quarterly* 4:3-4, 49-72.

Tonner, C. & Harrington, C. (2004). Nursing Facility and Home and Community Based Service Need Criteria in the United States. *Home Health and Community Services*

Quarterly 22 (4): 65-83.

U.S. Department of Health and Human Services. (2000) *Understanding Medicaid Home and Community Services: A Primer*. Washington DC: Office of the Assistant Secretary for Planning and Evaluation.

U.S. General Accounting Office (GAO) (1996), *Medicaid and Long-Term Care: Successful State Efforts to Expand Home Services While Limiting Costs*. Washington DC: GAO.

Vertrees J.C., Manton, K.G., & McDowell, I. (1989) Cost-Effectiveness of Home and Community-Based Care *Health Care Financing Review* 10:4, 65-78.

Weissert, W.G. (1985) Seven Reasons Why It is so Difficult to Make Community-Based Long-Term Care Cost-Effective. *Health Services Research* 20:4, 423-433.

Weissert, W.G., Cready, C.M., & Pawelak, J.E. (1988) The Past and Future of Home-and Community-Based Long-Term Care,” *The Milbank Quarterly* 66:2, 309-388.

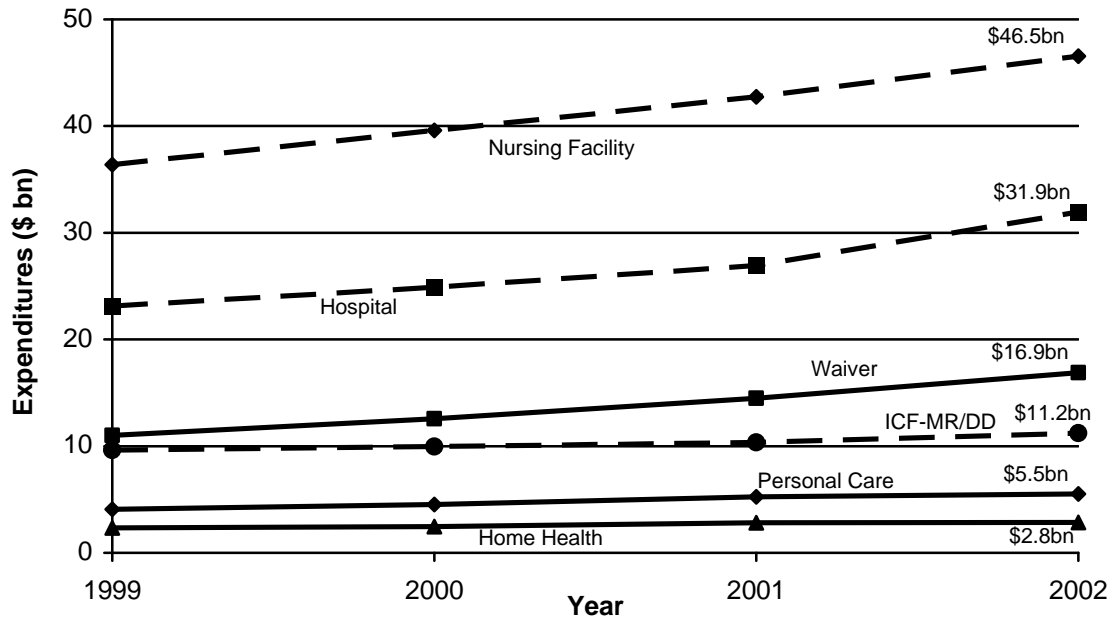
Weissert, W.G., Lesnick, T., Musliner, M., & Foley, K.A. (1997) Cost Savings from Home-and Community-Based Services: Arizona’s Capitated Medicaid Long-Term Care Program. *Journal of Health Politics, Policy and Law* 22:6, 1329-1357.

The White House (2002) *New Freedom Initiative: A Progress Report*. Retrieved February 2, 2004, from www.cms.hhs.gov/newfreedom.

Wiener, J.M., Estes, C.L., Goldenson, S.M., & Goldberg, S.C. (2001) What Happened to Long-Term Care in the Health Reform Debate of 1993-1994? Lessons for the Future. *Milbank Quarterly* 79:2, 207-252.

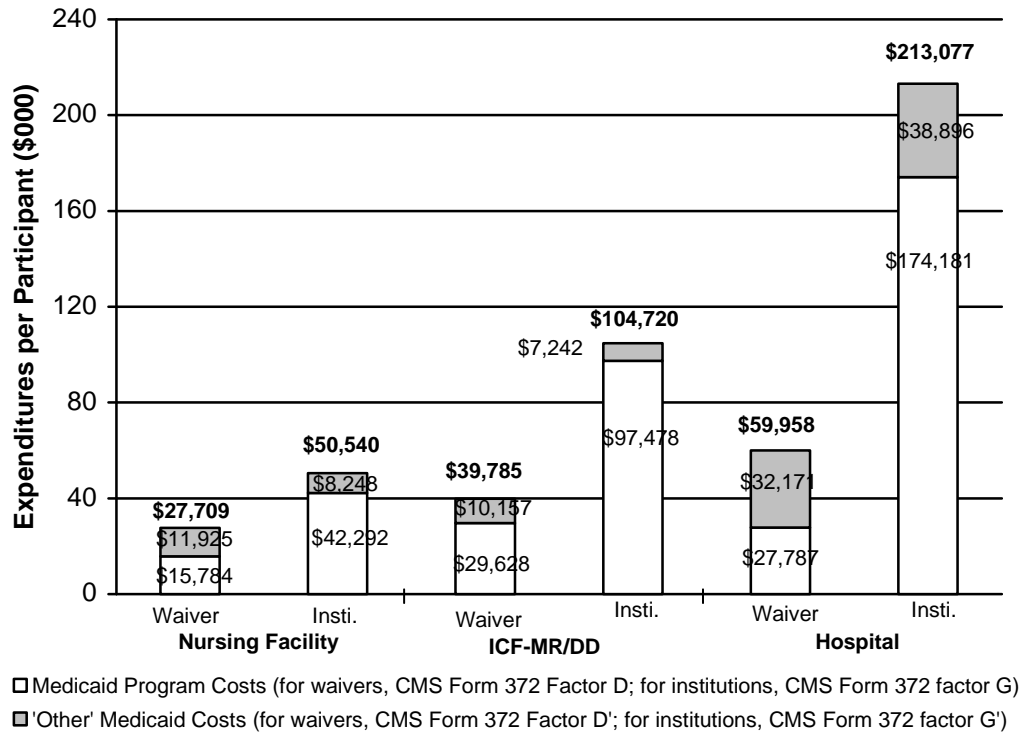
Wiener, J.M., Tilly, J., & Alexih, L.B. (2002) Home and Community-Based Services in Seven States. *Health Care Financing Review* 23:3, 89-114.

FIGURE 1: Medicaid Annual LTC Expenditures by Program, 1999-2002 (Total LTC Expenditures in 2002 = \$114 billion)



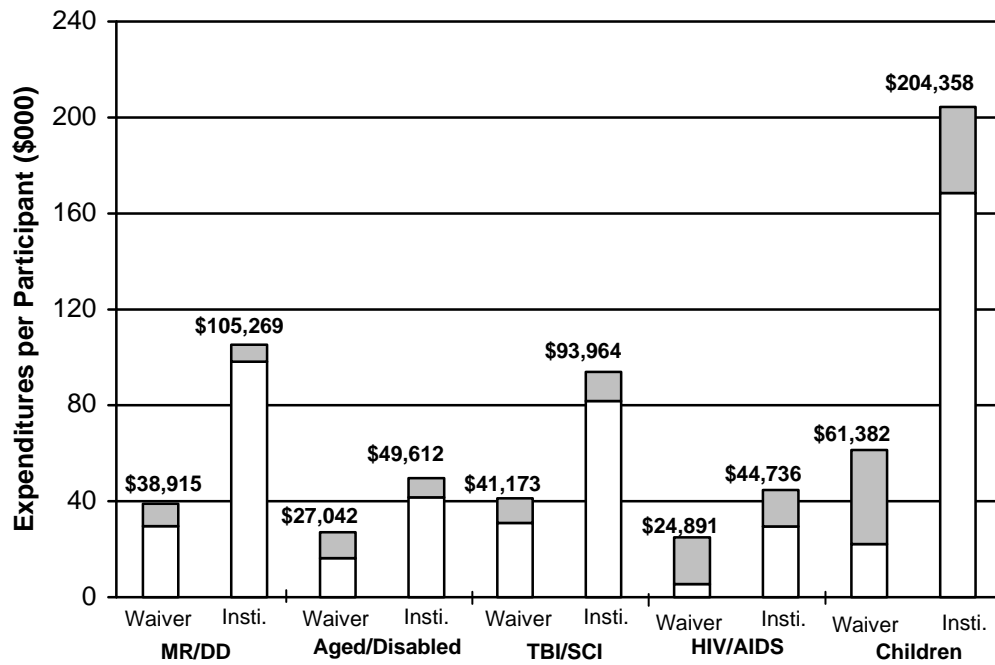
Source: For waiver, personal care service and home health data, CMS Form 372. Nursing facility, ICF/MR and hospital data were obtained from CMS Form 64 reported in Eiken, Burwell, & Schaefer, 2004.

FIGURE 2: Medicaid Annual per Participant HCBS Waiver and Institutional LTC Expenditures, by Waiver Level of Care, 2002.



Source: CMS Form 372 data

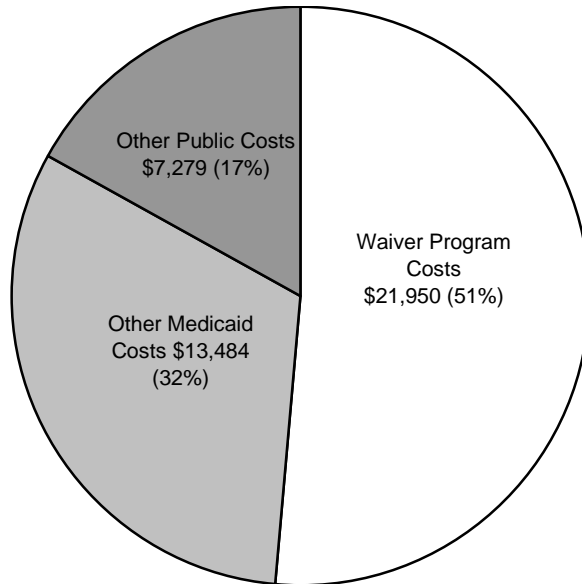
FIGURE 3: Medicaid Annual per Participant HCBS Waiver and Institutional LTC Expenditures, by Waiver Target Group, 2002.



□ Medicaid Program Costs (for waivers, CMS Form 372, Factor D; for institutions, CMS Form 372, Factor G)
 ■ 'Other' Medicaid Costs (for waivers, CMS Form 372, Factor D'; for institutions, CMS Form 372, Factor G')

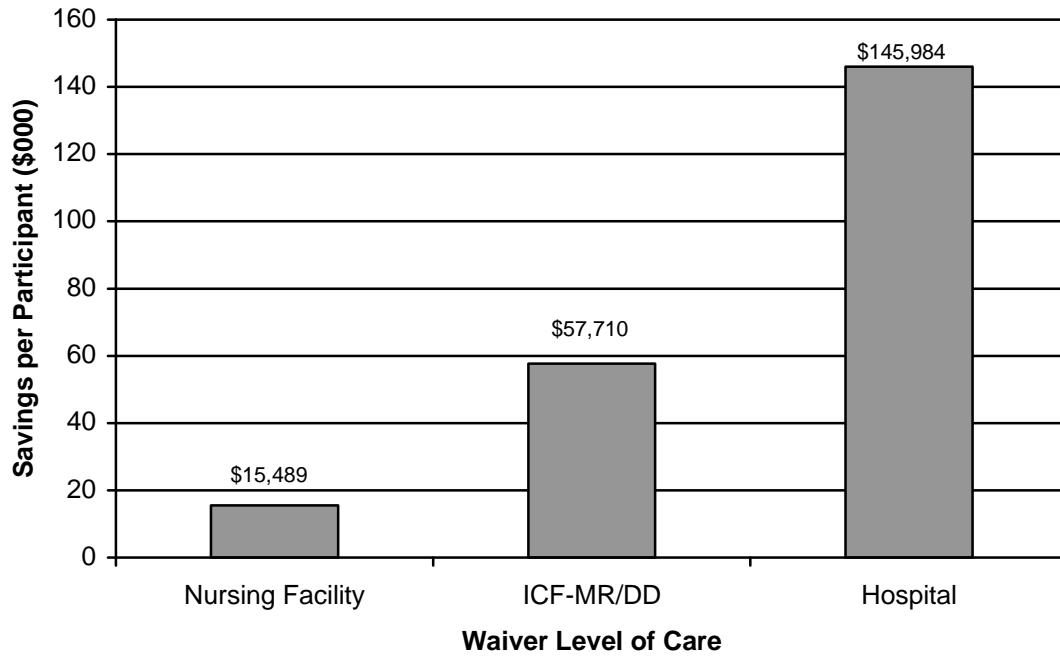
Source: CMS Form 372 data

FIGURE 4: Estimated Average Annual per Participant Public Cost of Medicaid HCBS Waivers, 2002 (National Average: \$42,713).



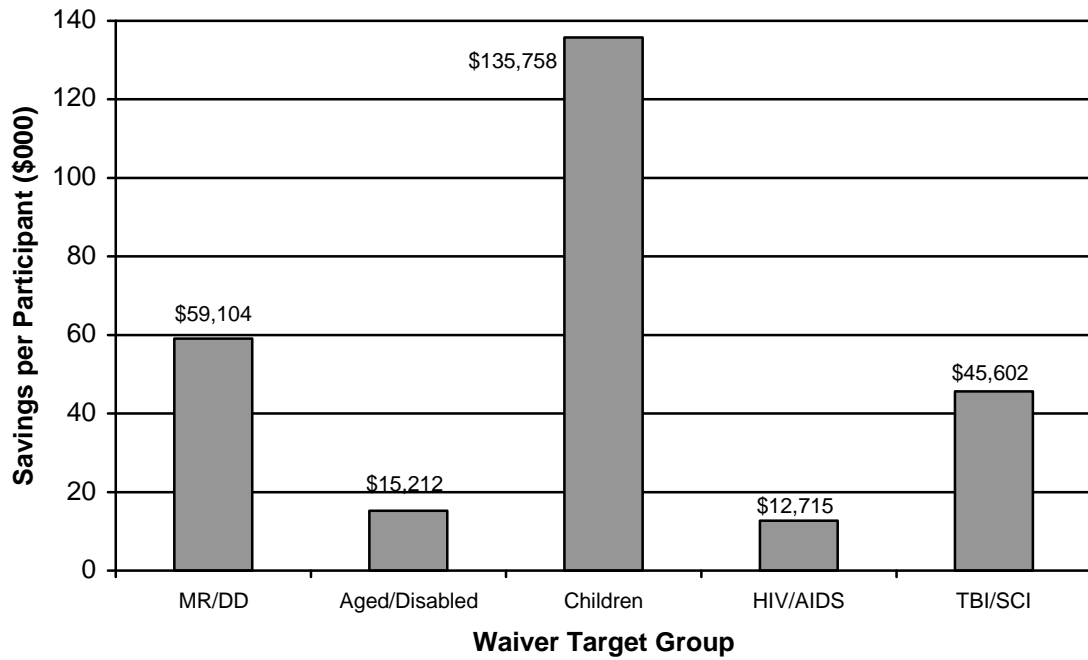
Source: For Medicaid program and other Medicaid costs, CMS Form 372s. Other public costs were obtained by authors' analysis of Social Security Administration supplemental income data/state supplemental program.

FIGURE 5: Estimated Annual per Participant Public Cost Savings from Medicaid HCBS Waivers, by Waiver Level of Care, 2002 (National Average: \$43,947).



Source: CMS Form 372 data

FIGURE 6: Estimated Annual per Participant Public Cost Savings from Medicaid HCBS Waivers, by Waiver Target Group, 2002 (National Average: \$43,947).



Source: CMS Form 372 data.

Appendix 1: CMS Form 372 Cost Neutrality Formula

The cost-neutrality formula is presented on CMS Form 372 in the form: $D + D' < G + G'$

where: **D** = annual per participant Medicaid waiver program cost (includes all waiver services such as personal care, case management, meals, home medications and other services allowed);

D' (called D prime) = annual per waiver participant cost of 'other' Medicaid services (e.g., hospital care, physician services, and prescription drugs);

G = state estimated annual Medicaid institutional cost per participant that would have been incurred were the waiver not granted; and

G' (G prime) = state estimated annual per participant cost of 'other' Medicaid services received by institutional participants (e.g., hospital care, and physician services).

Appendix 2: Estimation of Net ‘Other’ Public Cost of Waivers

The formula below was used to estimate the annual net other public cost of waiver participants over the ‘personal needs allowance’ paid to institutionalized participants:

EstPubWaivCost (estimated annual net other public cost of waiver participants) =
annual net per person SSI for persons living independently (FedNetIndep) +
annual net per person SSP for persons living independently (StateNetIndep)

Where: FedNetIndep = 12 x (monthly per person federal SSI payment for
people living independently – monthly per person federal SSI
payment to people living in facilities); and;

StateNetIndep = 12 x (monthly per person state SSP payment for
people living independently – monthly state SSP per person
‘personal needs allowance’ for people living in facilities)

Appendix 3: Estimation of Additional Net State & Sub-State Public Expenditures on Waiver Participants (StateNetIndep)

SSP Method 2002	No of States	Basis of Estimation	Estimation Method	StateNetIndep
SSP only to persons living independently (SSPPLI[1]); Av.=\$512.52	10	State & sub-state expenditures on waiver participants in addition to SSPPLI[1]	2 x SSPPLI[1]	Av. =\$1025.04
SSP to persons living independently (SSPPLI[2]) & to institutionalized persons (SSPIP[1]). Av. SSPPLI[2]=\$1009.92 Av. SSPIP[1]=\$241.08	14	Additional state & sub-state expenditures on waiver participants net of SSPIP[1]	2 x SSPPLI[2] minus SSPIP[1]	Av. = \$1778.76
SSP only to institutionalized persons (SSPIP[2]; Av.= \$210	6	Additional state & sub-state expenditures on waiver participants net of SSPIP[2]	Av. of SSPPLI[1]+ SSPPLI[2] minus SSPIP[2]	Av. = \$662.76
No SSP	20	Additional net state & sub-state expenditures on waiver participants	Av. of (SSPPLI[1] + SSPPLI[2]) minus Av. of (SSPIP[1] + SSPIP[2])	Av. = \$641.04
U.S Totals	50		-	\$1106.25

Data Sources: Social Security Administration’s SSI Annual Statistical Report 2002, Table 1, online at <http://www.ssa.gov>) and State Supplemental Payment (SSP) data (taken from Virginia Commonwealth University, School of Business, Employment Support Institute, online at <http://www.workworld.org>).