DOI: 10.1111/j.1475-6773.2006.00680.x

How Does Cash and Counseling Affect Costs?

Stacy B. Dale and Randall S. Brown

Objective. To test the effect of a consumer-directed model (Cash and Counseling) of Medicaid personal care services (PCS) or home- and community-based waiver services (HCBS) on the cost of Medicaid services.

Data Sources/Study Setting. Medicaid claims data were collected for all enrollees in the Cash and Counseling demonstration. Demonstration enrollees included those eligible for PCS (in Arkansas), those assessed to receive such services (in New Jersey), and recipients of Medicaid HCBS (in Florida). Enrollment occurred from December 1998 through April 2001. The follow-up period covered up to 24 months after enrollment.

Study Design. Demonstration volunteers were randomly assigned to have the option to participate in Cash and Counseling (the treatment group), or to receive Medicaid services as usual from an agency (the control group). Ordinary least squares regressions were used to estimate the effect of the program on costs for Medicaid PCS/waiver services and other Medicaid services, while controlling for consumers' preenrollment characteristics and preenrollment Medicaid spending. Models were estimated separately for nonelderly and elderly adults in each state and for children in Florida.

Data Extraction Methods. Each state supplied claims data for demonstration enrollees.

Principal Findings. Largely because the program increased consumers' ability to get the authorized amount of paid care, expenditures for personal care/waiver services were higher for the treatment group than for the control group in each state and age group, except among the elderly in Florida. Higher costs for personal care/waiver services were partially offset by savings in other Medicaid services, particularly those related to long-term care. During year 1, total Medicaid costs were generally higher for the treatment group than for the control group, with treatment–control cost differences ranging from 1 percent (and statistically insignificant) for the elderly in Florida to 17 percent for the elderly in Arkansas. In year 2, these cost differences were generally greater than in year 1. Only in Arkansas did the treatment–control difference in total cost shrink over time—to less than 5 percent (and statistically insignificant) in year 2.

Conclusions. Medicaid costs were generally higher under Cash and Counseling because those in the traditional system did not get the services they were entitled to. Compared with the treatment group, (1) control group members were less likely to receive any services at all (despite being authorized for them), and (2) service recipients received a lower proportion of the amount of care that was authorized. In addition, a flaw in Florida's reassessment procedures led to treatment group members receiving

more generous benefit amounts than control group members. To keep total Medicaid costs per recipient at the level incurred under the traditional system, consumer-directed programs need to be carefully designed and closely monitored.

Key Words. Consumer-direction, personal care, costs

The Cash and Counseling Demonstration and Evaluation was designed to assess whether a new, consumer-directed manner of obtaining personal care services (PCS) or home and community based services (HCBS) could improve the outcomes of beneficiaries and their caregivers without increasing the Medicaid cost per recipient for such services. Under Cash and Counseling, Medicaid beneficiaries could receive a monthly allowance to be used in lieu of PCS (in Arkansas and New Jersey) or HCBS waiver services (in Florida) they were authorized to receive. This allowance was supposed to be set so that per-person costs for care recipients under Cash and Counseling would be approximately equal to the amount that would have been expected had consumers received care under the traditional agency-based program. The program could still affect Medicaid costs, however, if the program increased the proportion of beneficiaries receiving care or the amount that they received. Furthermore, the program could affect Medicaid costs for services other than personal care in either direction. These costs could decrease if Cash and Counseling was more effective than the traditional PCS or waiver program in providing Medicaid beneficiaries with the assistance they need to remain at home instead of in nursing facilities. Costs could increase if beneficiaries were more likely to be injured or experience adverse events related to caregiving under consumer direction.

While Cash and Counseling only intended to change the manner of service provision to eligible beneficiaries, it had the potential to expand the number of recipients and the amount of services they used for two reasons. First, Cash and Counseling could improve access to care by expanding the supply of home-care workers as Cash and Counseling participants could hire family and friends who would not have been interested in working for an agency during a time of agency worker shortages. Additionally, individuals who found traditional PCS or waiver services unacceptable might find a flexible allowance appealing, and therefore be more likely to seek services under

---

Address correspondence to Randall Brown, Ph.D., Vice President, Director of Health Research, Mathematica Policy Research Inc., PO Box 2393, Princeton NJ 08543. Stacy B. Dale, M.P.A., Researcher, is with Mathematica Policy Research Inc., Princeton, NJ.

Cash and Counseling. In fact, results from the Channeling demonstration suggested that offering such services did not reduce long-term care costs because many who used the more attractive home-care alternatives would not have entered a nursing home under any circumstances (Kemper, Applebaum, and Harrigan 1987; Weissert, Cready, and Pawelak 1988). The potential for cost increases due to enrollment in the program by people who would not have sought agency services was greatest in Arkansas, as it was the only state that allowed "new" PCS applicants to enroll in Cash and Counseling. Individuals had to have been previously assessed to receive personal care (in New Jersey) or already receiving HCBS waiver services (in Florida) in order to enroll in the program. The goals of this paper are to examine Cash and Counseling's (1) effects on the costs and use of PCS/waiver services, (2) spillover effects on other Medicaid costs,[1] and (3) net effects on total Medicaid costs. We also seek to explain why Cash and Counseling might have affected costs for PCS/waiver services.

In short, we find that Medicaid costs for PCS/waiver services were higher for the treatment group than for the control group during the 2 years after enrollment for every state and age group except among the elderly in Florida (where less than half of treatment group members actually received the intervention). Medicaid costs for PCS/waiver services were higher both because the program increased the number of people receiving paid care (particularly in Arkansas, but also in New Jersey) and because costs per recipient were greater for the treatment group than for the control group (in all three states). Costs per recipient were higher for the treatment group primarily because (1) the control group received less care than authorized at baseline (in Arkansas and New Jersey), and (2) the treatment group received more care than authorized at baseline (among children and the nonelderly in Florida). While the participants' higher personal care/waiver costs were partially offset by lower costs for other long-term care services, total annual Medicaid costs were higher for the treatment group than for the control group for every state and age group, with treatment–control cost differences ranging from 1 percent (and statistically insignificant) for the elderly in Florida, to 17 percent for the elderly in Arkansas in year 1.

Expected Effects

Because it was authorized under a section 1115 waiver, Cash and Counseling was required to meet the Center for Medicaid and Medicare's (CMS's) budget-neutrality criterion with regard to expenditures on personal care or HCBS

(and a few other core services). This requirement was that the per person, per month cost for those receiving the cash allowance must be no greater than the per person, per month cost for control group members receiving agency services over the entire demonstration period. The hourly rate used to calculate consumers' allowance was set so that allowance costs plus accompanying fiscal agent and counseling costs for participants would not exceed their expected costs had they received agency care for the services authorized in their care plan. In general, allowances were based on the value of the "costed-out" services in the care plan (the services the allowance was provided in lieu of). Allowance amounts in Arkansas and Florida were adjusted by a "discount factor" to ensure that treatment group members' allowances were in line with the expected costs of services that similar control group members were likely to actually receive. (Consumers in the traditional program might receive less care than authorized in the care plan because of hospitalizations, workers failing to show up, or other reasons.) Arkansas multiplied the allowance by provider-specific discount factors ranging from 70 to 91 percent (86 percent on average), which were calculated from claims data for predemonstration years. In Florida, discount factors were 89 percent for the elderly, 83 percent for adults with physical disabilities, and 92 percent for children and adults with developmental disabilities. After finding that its beneficiaries typically received the full value of their care plans, New Jersey decided not to use a discount factor.

Expected Effects on PCS/Waiver Services

Allowances were supposed to be set so that expected costs per recipient, per month under Cash and Counseling would be similar to expected costs under the traditional program. Treatment group recipients could not incur higher Medicaid costs under Cash and Counseling than they would have incurred for the authorized service amount received under the traditional program, unless they received a reassessment indicating that they needed more care than was authorized at the time of enrollment. However, total spending for PCS/waiver services could have been higher (or lower) under Cash and Counseling, due to:

- shortages in the supply of agency workers, which could prevent control group members from receiving some or all of their authorized care,
- increases in the number of new PCS/waiver recipients,
- longer participation in the program among beneficiaries already receiving PCS/waiver benefits at enrollment,

- treatment group members having higher expenditures per recipient per month due to differences in the way reassessments were conducted for treatment and control group members,
- the potential for savings under Cash and Counseling on fiscal agent and counseling costs relative to the funding that was set aside to cover them, and
- an inaccurate discount rate.

The extent to which Cash and Counseling might affect Medicaid costs due to these factors varied for each of the three demonstration states because of differences in program rules, the way the programs were implemented, and other contextual factors, such as the local labor market. First, while agency-worker shortages were prevalent nationwide, they were most severe in Arkansas. In fact, increasing access to care was a specific goal in Arkansas, but not in New Jersey and Florida. Agencies in New Jersey and Florida reported that they had not had to turn clients away due to lack of staff.

Second, the number of PCS/waiver beneficiaries was most likely to increase in Arkansas, as it was the only state that allowed "new" PCS applicants to enroll in Cash and Counseling. However, in all three states, it was possible that consumers would be more likely to stop receiving services under the traditional program than under Cash and Counseling, if consumers found the allowance to be more valuable than agency services.

Third, treatment group recipients might be more likely to have their benefit level increased if they were treated differently from the control group at the time of reassessment in any of the three states. Initially, this possibility seemed least likely in Florida, as the same workers conducted reassessments for both the treatment and control groups. Acting as consultants, however, they might interpret the procedures for revising care plans differently for Cash and Counseling recipients than when acting as support coordinators or case managers for traditional program recipients. Furthermore, a concurrent, short-term directive from the state to increase services to Medicaid beneficiaries with developmental disabilities appeared to have influenced the allowance amounts for such consumers, as discussed below. In both Arkansas and New Jersey, agencies conducted reassessments for the control group, while Medicaid nurses (in New Jersey) and counselors (in Arkansas) conducted reassessments for the treatment group. Agencies might have been reluctant to increase the number of hours in consumers' care plans, even if such changes were justified, if the agency was experiencing labor shortages. In contrast, labor shortages would not have factored into the reassessments of treatment

group members, as they could hire friends and relatives. Finally, in Arkansas, counselors might have advocated for consumers at the time of reassessment, thereby increasing the care plan values of treatment group members.

Fourth, consumer-directed services could be less expensive than agency services if counseling or fiscal agency costs were less than the portion of the care plan amounts set aside to cover them in Arkansas and New Jersey. In Florida, for both nonelderly adults with physical disabilities and for the elderly, savings could be generated if the costs for consulting were less than those of case management under the traditional program. (There were no such savings opportunities for savings for nonelderly adults or children in Florida's Developmental Disabilities program because Medicaid paid the same fees for consulting under Centers for Disease Control and Prevention [CDC] as it paid for case management under the traditional program.)

Finally, in any of the states, the discount rate could have been too high or too low. This could occur if the people who signed up for the demonstration were different from the sample of PCS/waiver recipients used to calculate the discount rate, or because the ratio of hours received to hours planned varied during the demonstration.

Effects on Long-Term Care and Acute Care Services

Community-based care has the potential to reduce the need for nursing facility care (Fischer et al. 2003), so it is possible that Cash and Counseling could also affect the use of other Medicaid services related to long-term care. We would expect long-term care costs to be reduced most in Arkansas, as their program explicitly sought to improve access to PCS, which could in turn reduce the need for nursing facility services.

The program could also affect acute care costs. These costs could be higher for the treatment group if directly hired workers neglect consumers, perform health care tasks improperly, or wait too long to request medical attention for their clients. In such cases, consumers might fall more frequently than control group members, or they might develop more infections, bedsores, or contractures. Conversely, if the quality or amount of care that consumers received under Cash and Counseling was better than that received under the traditional program, the treatment group's Medicaid expenditures for addressing these problems could be less than the control group's.

Different Effects across States and Age Groups

We examine impacts separately for each state and age group (for the elderly and nonelderly in all three states, and for children in Florida). Our expectation is that effects may vary on these dimensions due to the different features of each state's program and because the needs and preferences of beneficiaries may vary by age.

Data and Methods

Outcome measures were constructed from Medicaid claims data for the first 12 months after enrollment for the full sample, and for 24 months after enrollment for a cohort of early enrollees for whom 2 full years of data were available. Sensitivity results showed that the year 1 results for the early cohort were similar to those for the full sample (see Dale and Brown 2005). Thus, differences between years 1 and 2 after enrollment are not due to the differences in samples for the two periods.

Our measure of Medicaid expenditures for the costed-out services requires some explanation. For treatment group members, these expenditures included the allowance costs, costs for counseling services, costs for fiscal agent services incurred by Medicaid, and Medicaid payments for traditional services (during those months when they were not receiving allowance payments but were receiving services from agencies). For control group members, these costs include payments to the agencies and other providers of the costed-out services. We netted out the unspent allowance amounts that were recouped by Florida and New Jersey.[2] Because data were not available at the time these data were analyzed, no such adjustments were made for Arkansas; however, the amount recouped there was small and would reduce the treatment group's mean personal care expenditures per year by only about $150 (about 3 percent: see Dale and Brown 2005).

The costs for fiscal agent and counseling services varied by state. In Arkansas, personal care costs include the fixed monthly fee that Medicaid paid for each consumer's counseling and fiscal agent services. For allowance recipients in New Jersey, personal care costs include the 10 percent of the value of the care plan that was set aside to cover fiscal agent and counseling costs. In Florida, waiver costs for allowance recipients include the fees that Medicaid paid for consulting services.

Estimation of Program Effects

As an intent-to-treat analysis, our impact estimates measure the effects of having the opportunity to receive the monthly allowance (because of being

randomly assigned to the treatment group), rather than of actually receiving it. Few treatment group members received the allowance during the full postenrollment study period. Some disenrolled from Cash and Counseling and nearly all took at least a few months to submit their spending plans. Some never received an allowance because they never submitted spending plans. Likewise, many control group members did not receive costed-out services in every postenrollment month. (Many in Arkansas did not receive any PCS during the postenrollment period.) In addition, some sample members died during the study period. First-year mortality rates for adult treatment and control group members were 14 and 12 percent, respectively, in Arkansas; 7 and 8 percent, respectively, in Florida; and 7 percent for both groups in New Jersey. First-year mortality rates for children were less than 1 percent for both the treatment and control groups. To avoid introducing possible selection bias, however, analyses of annual Medicaid expenditures included in the denominator even those who had died, or were no longer enrolled in Medicaid.

We used ordinary least squares to estimate our regression models, which controlled for the sample members' baseline measures of demographic characteristics, health and functioning, unmet needs for personal care, baseline care plan value, preenrollment Medicaid expenditures, preenrollment diagnoses, and the consumer's enrollment in Medicaid, Medicare, health maintenance organizations, and other Medicaid waiver programs (for details, see Brown and Dale 2007). These models increased the precision of the impact estimates and ensured that any chance differences between treatment and control groups in these preexisting characteristics did not distort our impact estimates. Regression results were used to calculate predicted means for the treatment and control groups by setting all regressors equal to their sample means.

Control variables that were consistently significantly and positively related to the expenditure outcome measures included the consumer's care plan values, preenrollment Medicaid costs, and whether the consumer was female. Full regression results are available from the authors upon request.

Our measure of total Medicaid costs was positively skewed for most state/age groups, with skewness coefficients ranging from 0.7 (for the Arkansas elderly) to 5.5. (for the Florida nonelderly). Nonetheless, according to Cochran's rule, our samples were large enough to assume a normal approximation to compute confidence limits.[3] To assess whether our impact estimates were distorted by outliers, we compared the distribution of total costs and personal care costs for the treatment group with that of the control group. The treatment–control difference in median costs was always the same sign, and generally of a similar magnitude, as the treatment–control difference in mean costs.

Sample Description

As would be expected under random assignment, there were few significant differences between treatment and control group members' baseline characteristics (Brown and Dale 2007). However, there were sizeable differences between states in the characteristics of enrollees. While nearly 40 percent of sample members in Arkansas lived in rural areas (which could make it difficult for agencies and consumers to recruit workers), only 13 percent of Florida's adult sample members and 10 percent of New Jersey's did so. In keeping with New Jersey's program requirements, nearly all (97 percent) sample members in that state had received personal care in the year before enrollment, whereas in Arkansas only 69 percent had received it. While 100 percent of all sample members in Florida had received *waiver services* in the year before enrollment (as Florida's program required), only 78 percent of adults and 53 percent of children had received PCS, because some sample members received only other (nonpersonal care) waiver services such as therapy or supplies.

Results

Allowance and Service Receipt in the Treatment Group

Owing to delays in developing spending plans, treatment group members started receiving the cash allowance at different times in each state. By 6 months postenrollment, the percentage of treatment group members receiving an allowance was 80 percent in Arkansas, but only 39 percent of adults and 52 percent of children in Florida, and 57 percent in New Jersey (Schore, Foster, and Philips 2007). In New Jersey, about a third of treatment group members never received an allowance during their first postenrollment year. In Florida, almost half of adults (59 percent of the elderly and 42 percent of the nonelderly) and about a quarter of children never received an allowance.[4] Nonetheless, nearly all treatment group members in each state received traditional services in months that they did not receive allowances.

Program Effects on the Receipt of Any Paid Service

In both age groups in Arkansas and New Jersey, treatment group members were more likely than control group members to receive any paid services. The program's impact on the receipt of paid care was greatest in Arkansas. In fact, during the first postenrollment year in Arkansas, only 75 percent of

Table 1: Effect of Cash and Counseling on Personal Care/Waiver Service Receipt and Expenditures, by Year

State/Age Group	*Percent Receiving Personal Care/Waiver Services*				*Personal Care/Waiver Expenditures (Dollars)*			
	Predicted Treatment Group Mean	*Predicted Control Group Mean*	*Estimated Effect*	*p-value*	*Predicted Treatment Group Mean*	*Predicted Control Group Mean*	*Estimated Effect*	*p-value*
Arkansas								
Nonelderly								
Year 1 ($n = 556$)	97.8	63.2	34.6	.000	5,435	2,430	3,005	.000
Year 2 ($n = 385$)	84.0	48.2	35.9	.000	5,030	2,009	3,021	.000
Elderly								
Year 1 ($n = 1{,}452$)	96.8	75.2	21.6	.000	4,313	2,292	2,021	.000
Year 2 ($n = 929$)	71.6	56.8	14.8	.002	3,396	1,734	1,661	.000
Florida								
Nonelderly								
Year 1 ($n = 913$)	99.6	99.8	−0.2	.562	22,019	18,321	3,696	.000
Year 2 ($n = 833$)	97.6	97.4	0.2	.856	24,932	21,491	3,440	.001
Elderly								
Year 1 ($n = 904$)	99.1	98.7	0.5	.520	10,496	10,063	433	.223
Year 2 ($n = 591$)	81.1	75.5	5.6	.097	8,983	8,328	655	.328
Children								
Year 1 ($n = 1{,}002$)	99.8	99.2	0.6	.179	15,966	12,647	3,319	.000
Year 2 ($n = 1{,}002$)	97.4	97.4	0.0	1.000	18,859	14,046	4,812	.000
New Jersey								
Nonelderly								
Year 1 ($n = 813$)	95.8	87.6	8.2	.000	11,166	9,220	1,946	.000
Year 2 ($n = 671$)	85.2	67.6	17.7	.000	11,772	8,127	3,645	.000
Elderly								
Year 1 ($n = 917$)	97.0	89.7	7.3	.000	11,891	10,650	1,241	.000
Year 2 ($n = 776$)	83.2	74.0	9.2	.002	10,938	9,396	1,542	.005

Means predicted using regression models that controlled for baseline measures of the consumer's demographic characteristics, health and functioning, unmet needs for personal care, baseline care plan value, preenrollment Medicaid expenditures, preenrollment diagnoses, the consumer's length of time enrolled in Medicaid, and whether they were enrolled in Medicare, a health maintenance organization, and other Medicaid waiver programs. For adults, year 2 results pertain to those who enrolled earlier than May 1, 2000 in Arkansas; October 1, 2001 in Florida; and January 1, 2002 in New Jersey.

Source: Medicaid claims data.

elderly control group members and 63 percent of nonelderly ones received any PCS (either an allowance or traditional services), compared with about 97 percent of elderly and nonelderly treatment group members (Table 1). The large treatment–control difference in the receipt of paid services was similar in year 2, but a lower percentage of the sample received PCS because some sample members died or entered nursing facilities.

In New Jersey, about 96 percent of treatment group members in each age group received services during year 1, compared with about 88 percent of control group members. The treatment–control difference in the receipt of paid services impact grew over time.

In Florida, the program had no effect on whether beneficiaries received any waiver services in year 1, as almost all treatment and control group members (in each age group) received at least some paid services. In year 2 the pattern was similar for the nonelderly and the children, but elderly treatment group members were more likely than controls to receive services.

Program Effects on Expenditures for Costed-Out Services

Partly because the program increased access to paid care, treatment group expenditures for the costed-out services were significantly higher than those for the control group in all age groups in all three states, except among the elderly in Florida. However, the magnitudes of the cost differences varied widely across the three states. In Arkansas, average personal costs per treatment group member for both age groups were about double the average care costs per control group member in both years. In contrast, in Florida, this treatment–control difference was only about 15 percent for nonelderly adults in both years, and statistically insignificant and small for the elderly. (This small treatment–control difference in costs for the elderly was not surprising as only 40 percent of the elderly treatment group actually received an allowance.) For children in Florida and nonelderly adults in New Jersey, costs for the treatment group were substantially higher than those for the control group in year 1 and the gap increased in year 2.

Reasons for Increase in PCS/Waiver Costs per Recipient

The treatment–control difference in PCS/waiver costs was partly due to the treatment group being more likely than the control group to receive at least some paid services during the study period (especially in Arkansas and New Jersey). However, the cost per recipient was also higher for the treatment

group, although this problem occurred in each state for different reasons, and affected the nonelderly more than the elderly.

To assess why costs per recipient were higher for the treatment group than for the control group, we compared actual costs with the costs that would be expected, had consumers received through the traditional system the services to which they were entitled. To assess this for allowance recipients, we calculated the ratio of the actual average Medicaid costs for the allowance per month received (plus accompanying consultant and fiscal agent costs) to their average expected cost, computed from the value of their care plans at enrollment. (In Arkansas and Florida, this calculation included multiplying the dollar value of the services authorized in the care plan services by the discount factor applicable to that individual. New Jersey did not discount the allowance.) We performed analogous calculations for control group recipients of traditional services by dividing their actual Medicaid costs per month received for traditional services to their expected costs from the care plan. Cost ratios of 1 indicate that individuals, on average, received all of the care expected according to their discounted care plan at baseline. In general, the ratio of actual costs to expected costs would tend to increase somewhat over time, on average, for both the treatment and control groups, as beneficiaries' health care needs increase and as agency wage rates per hour (and the rate at which the allowance was cashed out) increase.

In Arkansas, the agency system's failure to deliver the authorized amounts of care to control group members was the primary reason for the treatment–control difference in costs per recipient per month. For both age groups, the costs per month for allowance recipients in the treatment group were about what they were expected to be (ratios of about 1.0, Table 2). However, control group personal care/waiver recipients received only 82 percent of the expected amounts (that is, even after discounting) between both age groups at the end of each year (during months 12 and 24).

In New Jersey, the modest difference in costs per recipient under Cash and Counseling during the first year were attributable mostly to nonelderly control group recipients getting somewhat less care than expected, with cost ratios for control group recipients only 0.96 in month 12, compared with 1.02 for treatment group allowance recipients. Elderly allowance recipients and control group recipients both had costs that were similar to what was expected at baseline in year 1; the cost ratios of both groups increased over time.

In Florida, for nonelderly adults and children, costs per recipient were significantly greater for the treatment than the control group primarily because treatment group allowances far exceeded the care plan amount. During month

Table 2: Ratios of Mean Actual to Mean Expected Costs

	Arkansas		*Florida*		*New Jersey*	
	Allowance Recipients	*Control Group PCS Recipients*	*Allowance Recipients*	*Control Group Waiver Recipients*	*Allowance Recipients*	*Control Group PCS Recipients*
Nonelderly						
Month 12	0.95	0.82	1.16	0.97	1.02	0.96
Month 24	0.92	0.82	1.27	1.19	1.13	1.06
Elderly						
Month 12	1.01	0.82	1.06	1.17	1.04	1.02
Month 24	1.04	0.79	1.16	1.32	1.13	1.07
Children						
Month 12	NA	NA	1.26	0.89	NA	NA
Month 24	NA	NA	1.36	1.10	NA	NA
Maximum *N*						
Nonelderly	194	119	254	390	241	254
Elderly	410	365	147	334	259	322
Children	NA	NA	352	411	NA	NA

For allowance recipients, actual costs include costs for the allowance, fiscal agent, and counseling services. For control group recipients, actual costs include personal care costs (in Arkansas and New Jersey) or waiver costs (in Florida). For allowance recipients and control group recipients, expected costs are equal to the discounted value of the baseline care plan in Arkansas and Florida and the full value of the care plan in New Jersey (where allowances were not discounted), plus expected costs for fiscal agent and counseling services. For adults, year 2 results pertain to those who enrolled earlier than May 1, 2000 in Arkansas; October 1, 2001 in Florida; and January 1, 2002 in New Jersey.

PCS, personal care services.

Source: Medicaid claims data and care plan data.

12, children received 26 percent more than expected, and nonelderly adults received 16 percent more than expected. Also, there was some underservice among control group recipients; during month 12, children received only 89 percent of what was expected and the nonelderly receiving 97 percent of what was expected. By month 24, ratios for both allowance recipients and control group recipients increased substantially, but the gap between the groups persisted. Among Florida's elderly, both control group recipients and allowance recipients (as well as the high fraction of treatment group members who received traditional services rather than allowances [not shown]) had higher ratios than expected during both years. Florida's elderly was the only age group in any state for which the treatment group's ratio was lower than the control group's (Table 2).

Table 3: Effect of Cash and Counseling on Annual Expenditures for Nonpersonal Care/Nonwaiver Services and Total Medicaid Services during First Postenrollment Year

	Nonpersonal Care/Nonwaiver Costs (Dollars)				*Total Medicaid Costs (Dollars)*			
Dependent Variable	*Predicted Treatment Group Mean*	*Predicted Control Group Mean*	*Estimated Effect*	*p-value*	*Predicted Treatment Group Mean*	*Predicted Control Group Mean*	*Estimated Effect*	*p-value*
Arkansas								
Nonelderly ($n = 556$)	8,689	10,432	− 1,743	.035	14,125	12,862	1,263	.136
Elderly ($n = 1,452$)	7,211	7,530	− 320	.197	11,523	9,822	1,701	.000
Florida								
Nonelderly ($n = 913$)	5,416	5,785	− 369	.410	27,433	24,106	3,327	.000
Elderly ($n = 833$)	5,475	5,771	− 296	.534	15,971	15,833	137	.800
Children ($n = 1,002$)	14,008	16,447	− 2,439	.031	29,974	29,095	880	.476
New Jersey								
Nonelderly ($n = 813$)	15,697	16,829	− 1132	.430	26,863	26,049	814	.588
Elderly ($n = 917$)	8,345	8,757	− 413	.501	20,236	19,407	828	.224

Means predicted using ordinary least squares regression models that controlled for baseline measures of the consumer's demographic characteristics, health and functioning, unmet needs for personal care, baseline care plan value, preenrollment Medicaid expenditures, preenrollment diagnoses, the consumer's length of time enrolled in Medicaid, and whether they were enrolled in Medicare, a health maintenance organization, and other Medicaid waiver programs.

Source: Medicaid claims data.

Table 4: Effect of Cash and Counseling on Annual Expenditures for Nonpersonal Care/Nonwaiver Services and Total Medicaid Services during Second Postenrollment Year

	Nonpersonal Care/Nonwaiver Costs (Dollars)				*Total Medicaid Costs (Dollars)*			
Dependent Variable	*Predicted Treatment Group Mean*	*Predicted Control Group Mean*	*Estimated Effect*	*p-value*	*Predicted Treatment Group Mean*	*Predicted Control Group Mean*	*Estimated Effect*	*p-value*
Arkansas								
Nonelderly ($n = 385$)	8,998	11,460	− 2,462	.051	14,027	13,469	559	.677
Elderly ($n = 929$)	6,425	7,704	− 1,279	.009	9,820	9,438	382	.478
Florida								
Nonelderly ($n = 833$)	5,312	5,154	158	.741	30,243	26,645	3,598	.001
Elderly ($n = 591$)	6,970	6,558	412	.668	15,953	14,886	1,067	.320
Children ($n = 1,002$)	14,599	16,830	− 2,231	.098	33,458	30,877	2581	.082
New Jersey								
Nonelderly ($n = 671$)	12,653	13,411	− 758	.548	24,425	21,539	2,887	.042
Elderly ($n = 776$)	9,077	8,579	498	.569	20,015	17,975	2,040	.048

Means predicted using ordinary least squares regression models that controlled for baseline measures of the consumer's demographic characteristics, health and functioning, unmet needs for personal care, baseline care plan value, preenrollment Medicaid expenditures, preenrollment diagnoses, the consumer's length of time enrolled in Medicaid, and whether they were enrolled in Medicare, a health maintenance organization, and other Medicaid waiver programs.

For adults, year 2 results pertain to those who enrolled earlier than May 1, 2000 in Arkansas; October 1, 2001 in Florida; and January 1, 2002 in New Jersey.

Source: Medicaid claims data.

Program Effects on Other Medicaid Costs

Costs for Medicaid services other than PCS/waiver services were lower for the treatment group than for the control group in every state-age group category during the first year after enrollment (Table 3). However, the differences were large (15–17 percent of the control group mean) and statistically significant only for nonelderly adults in Arkansas and for children in Florida. For the five other state-age groups, the treatment groups' costs were only about 4–7 percent below the corresponding control group costs.

The treatment group's savings were primarily on a variety of services related to long-term care (not shown; see Dale and Brown 2005). The main cost reductions in Arkansas were for nursing facility, hospital, and home health care, and for ElderChoices (the supplementary waiver program covering additional personal care hours [beyond the state's PCS benefit] for older Medicaid beneficiaries). In New Jersey, the treatment group had significantly lower nursing home expenditures and home health expenditures. However, the treatment group's average total cost for all non-PCS Medicaid services (i.e., costs for long-term care plus hospital, physician, and other services) was not significantly lower than this average for the control group. For Florida children, the major source of the difference in nonwaiver Medicaid costs was the treatment group's nearly 30 percent lower cost for private duty nursing ($4,773, versus $6,639 for the control group).

Program Effects on Total Medicaid Costs

Total Medicaid costs were higher for the treatment group for every state and age group, but not significantly so in most cases. The treatment group's lower cost for long-term care and other services partially offset its higher personal care/waiver costs, resulting in differences in total Medicaid costs that were statistically significant only for elderly consumers in Arkansas (17 percent) and for younger adults in Florida (14 percent) in year 1. The Arkansas cost difference for the nonelderly was large (10 percent), but not statistically significant reflecting the small sample size of this group. For the other state-age group categories, the treatment–control difference was less than 5 percent.

For most groups, the treatment–control difference in total Medicaid costs grew over time. Savings in non-PCS/nonwaiver costs generally diminished, while the treatment–control difference in PCS/waiver costs increased as consumers received their allowances for a greater number of months in year 2 than in year 1. Most notably, for children in Florida, the treatment–control difference grew from only 3 percent of the control group mean in year 1 to 8 percent ($p = .082$) in year 2 (Table 4). Only in Arkansas did the treatment–control

difference in total cost shrink over time—the significant 14 percent year 1 difference decreased to an insignificant 4.7 percent in year 2. In Arkansas, the unfavorable treatment–control difference in personal care decreased over time, while the favorable difference in other Medicaid costs increased by $500; thus, the savings in non-PCS costs offset about three-fourths of the increase in PCS costs.

DISCUSSION

Overview

Largely because Cash and Counseling increased access to paid care, Medicaid expenditures for personal care/waiver services were higher for the treatment group than for the control group in each state and age group during the 2 years after enrollment, except among the elderly in Florida. Savings in other long-term care Medicaid services partially offset the treatment group's higher PCS/waiver costs. While total Medicaid costs were higher for the treatment group than for the control group in each state and age group, the treatment–control difference ranged widely, from 1 percent and statistically insignificant among the Florida elderly to 17 percent for the elderly in Arkansas in year 1.

Our results suggest that increases in the number of PCS/waiver recipients, agency worker shortages, and reassessment procedures each played a role in the higher PCS/waiver costs of the treatment group, though the degree to which each was a factor varied by state and age group. Similar to past HCBS demonstrations, the appeal of the new Cash and Counseling program appears to have expanded the number of people receiving paid services, particularly in Arkansas. In the Arkansas control group, a very high percentage (66 percent) of "new" applicants (who did not receive PCS before enrollment) did not receive any PCS in the year after enrollment. This suggests that at least some of them were not interested in receiving services in the traditional program (Dale, Brown, and Phillips 2004). Additionally, the control group experienced a greater drop-off in participation than the treatment group in the traditional program in Florida and New Jersey. This pattern suggests that some consumers who may have been unwilling to continue with traditional services did continue to obtain care under Cash and Counseling. On the other hand, during the demonstration, the ratio of new to continuing beneficiaries never exceeded historical levels in any state (Foster, Brown, and Shapiro 2005), suggesting that the demonstration did not trigger a large influx of enrollees.

The second reason for the increase in PCS/waiver costs under Cash and Counseling was that some control group members were unable to obtain any or all of the services in their care plan. The lack of providers in rural areas and/or the nationwide agency worker shortages (that were severe in Arkansas) may have caused such access problems. In fact, PCS recipients in Arkansas's control group received only about 80 percent of the expected amount of care (and only two-thirds of what was authorized).

Finally, costs per recipient were higher for the treatment group because allowance recipients were more likely than traditional recipients to receive increases in their care plans during reassessments. In Arkansas and New Jersey, agencies might not have wanted to increase care plan hours for control group members during labor shortages. In contrast, because treatment group members could hire friends and relatives, labor shortages were not a factor in these assessments done by counselors in Arkansas and by Medicaid nurses' in New Jersey. Additionally, in Arkansas, some counselors may have advocated for consumers and increased their care plan hours. In Florida, counselors had limited training and often were unsure of program rules. In an effort to be flexible, counselors may have authorized requests to increase care plans for consumer-directed clients that would not have been authorized under the traditional program. Florida's Cash and Counseling director believes this tendency was exacerbated by a concurrent, concerted effort by Florida to increase resources devoted to waiver services for Medicaid consumers with disabilities.

Cash and Counseling services did generate savings in other Medicaid services, which partly offset the higher costs for PCS/waiver services. In Arkansas, savings in nursing facility and other long-term care services were enough to offset three-fourths of the treatment group's higher personal care costs during the second year. However, the savings in nursing facility and home health services in New Jersey—which offset half the treatment–control difference in personal care costs in year 1—did not persist in year 2. The long-term care savings in Florida were small and not statistically significant.

The fact that Cash and Counseling services did not consistently generate savings in long-term care services across states and time periods is consistent with the literature on the ability of most interventions to reduce nursing facility use. There is little rigorous evidence showing that HCBS are a cost-effective way to reduce long-term care spending, even though they are intended to substitute for more expensive nursing facility services (Grabowski 2006; Feder et al. 2000). Even a promising geriatric assessment program did not reduce

overall health care costs, because the nursing facility savings were offset by the higher cost of the intervention (Phibbs et al. 2006).

Cash and Counseling's impacts on other (non-PCS) long-term care services may have been greatest in Arkansas because limited access to PCS may have caused more control group members to end up in nursing facilities. In fact, many control group members did not receive any paid care in Arkansas, and agencies only provided control group members with about two-thirds of what was authorized. In contrast, in the other two states, nearly all control group members received some care because they limited their programs to consumers already receiving, or assessed to receive, agency services; moreover, recipients obtained about 95 percent of the care expected.

Finally, Cash and Counseling did not increase the need for acute care (that is, for services not related to long-term care), as Medicaid or Medicare expenditures for such services were not significantly affected by the program (see Dale and Brown 2005, for Medicare results). This finding is consistent with self-reported data indicating that treatment group members were no more likely than control group members to fall, develop contractures, have respiratory infections, or experience other care-related health problems (Carlson et al. 2007).

Policy Implications

Would introducing a Cash and Counseling increase a state's Medicaid costs? The answer depends on how the program is developed and monitored, and on the shortcomings of the traditional agency-based program. Since the initial 2-year follow-up period studied here ended, states have taken several steps that could reduce the costs of consumer direction over time. For example, Arkansas developed a more cost-effective manner of providing counseling and fiscal services. Florida adopted standardized assessment procedures to assure that care plan amounts were determined and reassessed in the same way regardless of whether it is the consumer or agency that directs the services received. Other possible steps are that programs could either impose a discount rate or making the existing discount rate steeper. For example, imposing a small discount rate in New Jersey would have made care recipients' costs similar for the treatment and control groups. If such cost-cutting measures are successful, the difference between the costs of Cash and Counseling and the traditional system should decrease over time.

While increasing the discount rate or introducing other cost-cutting measures could reduce the beneficial effects of the program, further analyses

suggested that it is unlikely as long as consumers receive allowances roughly commensurate with their care plans. Sensitivity tests indicated that the program's impacts on satisfaction and unmet needs were somewhat smaller after we controlled for the ratio of actual to expected costs, but they were still sizable and statistically significant (Dale and Brown 2005). Thus, consumer's greater satisfaction under Cash and Counseling was not attributable solely to the greater value of the benefit they received.

While Cash and Counseling did increase total Medicaid costs, it also brought about sizable gains in consumer and caregiver well-being (Carlson et al. 2007; Foster, Dale, and Brown 2007). The higher costs attributable to increased access to care might be viewed as the amount of underspending on those eligible for the traditional program because Cash and Counseling helped obtain paid assistance for eligible consumers who would have been unable to get this care from agencies. Indeed, the failure of many beneficiaries to receive authorized care in the traditional program has caused concern that the existing system is inadequate and threatens beneficiaries' health (U.S. General Accounting Office 2003). Others have suggested that consumer-directed programs might be justified because of the benefits they bring to caregivers and their families (rather than because of their cost-effectiveness; Kemper, Applebaum, and Harrigan 1987).

Overall, the experience of Cash and Counseling suggests that the impact of future consumer-directed programs on total Medicaid costs is likely to be modest. Appropriate discount rates and reassessment procedures can keep costs per recipient close to what they should be under the traditional system. Even if future programs do increase access to paid care (and the costs of providing that care), they might generate offsetting savings in other long-term care services, as did the Arkansas program.

ACKNOWLEDGMENTS

This article was based on analyses conducted as part of the Evaluation of the National Cash and Counseling Demonstration, which was jointly funded by The Robert Wood Johnson Foundation (RWJF) and the Office of the Assistant Secretary for Planning and Evaluation (ASPE) at the U.S. Department of Health and Human Services. RWJF provided additional funding for the preparation of this article.

Disclosures: None.

Disclaimers: The views expressed here are those of the authors and do not necessarily reflect those of RWJF, ASPE, the Cash and Counseling National Program Office, the demonstration states, or the Centers for Medicare and Medicaid Services, whose waivers made the demonstration possible.

NOTES

1. As nearly all of the elderly and 40 percent of the nonelderly had Medicare coverage, we also examined the program's effects on Medicare costs (Dale and Brown 2005). The treatment–control difference in total Medicare costs as a percentage of the control group mean was about -5 percent in Florida, $+1$ percent in Arkansas, and $+14$ percent in New Jersey. While none of these differences were statistically significant, we would only be able to detect sizeable program effects (more than 30 percent of the control group mean) due to the large variation in total Medicare costs and modest sample sizes. Nonetheless, the inconsistent pattern of the Medicare costs findings, together with survey data that indicated that treatment group members were no more likely than control group members to experience health problems or other adverse events (Carlson et al. 2007), suggest that the program had little or no effect on the need for acute care, and therefore little effect on Medicare expenditures.
2. See Phillips and Schneider (2007) this issue for reasons allowances were recouped.
3. Cochran's rule states that the sample size (N) should be greater than G_1^2, where G_1 is Fisher's measure of skew.
4. See Phillips and Schneider (2007) for reasons that allowances were delayed or never received by consumers.

REFERENCES

Brown, R., and S. Dale. 2007. "The Research Design and Methodological Issues for the Cash and Counseling Evaluation." *Health Services Research* 42 (1, suppl. 1) DOI: 10.1111/j.1475-6773.2006.00671.x

Carlson, B., L. Foster, S. Dale, and R. Brown. 2007. "Effects of Cash and Counseling on Personal Care and Well-Being." *Health Services Research* 42 (1, suppl. 1) DOI: 10.1111/j.1475-6773.2006.00673.x

Dale, S., and R. Brown. 2005. *The Effect of Cash and Counseling on Medicaid and Medicare Costs: Findings for Adults in Three States.* Princeton, NJ: Mathematica Policy Research Inc.

Dale, S., R. Brown, and B. Phillips. 2004. *Does Arkansas' Cash and Counseling Affect Public Costs?* Princeton, NJ: Mathematica Policy Research Inc.

Feder, J., H. L. Komisar, and M. Niefeld. 2000. "Long-Term Care in the United States: An Overview." *Health Affairs* 10: 40–56.

Fischer, L. R., C. A. Green, M. J. Goodman, K. K. Brody, M. Aickin, F. Wei, L. W. Phelps, and W. Leutz. 2003. "Community-based and Risk of Nursing Home Placement." *Medical Care* 41 (12): 1407–16.

Foster, L., R. Brown, and R. Shapiro. 2005. *Assessing the Appeal of the Cash and Counseling Demonstration in Arkansas, Florida, and New Jersey.* Princeton, NJ: Mathematica Policy Research Inc.

Foster, L., S. Dale, and R. Brown. 2007. "How Caregivers and Workers Fared in Cash and Counseling." *Health Services Research* 42 (1, suppl. 1) DOI: 10.1111/j.1475-6773.2006.00672.x

Grabowski, D. 2006. "The Cost-Effectiveness of Noninstitutional Long-Term Care Services: Review and Synthesis of the Most Recent Evidence." *Medical Care Research and Review* 63 (1): 3–28.

Kemper, P., R. Applebaum, and M. Harrigan. 1987. "Community Care Demonstrations: What Have We Learned?" *Health Care Financing Review* 8 (4): 87–100.

Phibbs, C. S., J. E. Holty, M. K. Goldstein, A. M. Garber, Y. Wang, J. R. Feussner, and H. J. Cohen. 2006. "The Effect of Geriatrics Evaluation and Management on Nursing Home Use and Health Care Costs: Results from a Randomized Trial." *Medical Care* 44 (1): 91–5.

Phillips, B., and B. Schneider. "Commonalities and Variations in the Cash and Counseling Programs across the Three Demonstration States." *Health Services Research* 42 (1, suppl. 1) DOI: 10.1111/j.1475-6773.2006.00677.x

Schore, J., L. Foster, and B. Phillips. 2007. "Consumer Enrollment and Experiences in the Cash and Counseling Program." *Health Services Research* 42 (1, suppl. 1) DOI: 10.1111/j.1475-6773.2006.00679.x

U.S. General Accounting Office. 2003. Long-Term Care: Federal Oversight of Growing Medicaid Home and Community-Based Waivers Should Be Strengthened. Pub. No. GAO-03-576. Washington, DC: GAO.

Weissert, W., C. Cready, and J. Pawelak. 1988. "The Past and Future of Home and Community-Based Long Term Care." *Milbank Quarterly* 66 (2): 309–88.