

Costs Per Child for Early Childhood Education and Care

Comparing Head Start, CCDF Child Care, and
Prekindergarten/Preschool Programs
(2003/2004)

Douglas J. Besharov
Justus A. Myers
and
Jeffrey S. Morrow

August 31, 2007



Welfare Reform Academy
University of Maryland
American Enterprise Institute
1150 Seventeenth Street, N.W.
Washington, D.C. 20036
www.welfareacademy.org



Douglas J. Besharov is the Joseph J. and Violet Jacobs Scholar in Social Welfare Studies at the American Enterprise Institute, and a professor at the University of Maryland School of Public Policy. Justus A. Myers is a research assistant at the American Enterprise Institute. Jeffrey S. Morrow is a research assistant at the American Enterprise Institute/Welfare Reform Academy, and a student at the Georgetown Law Center.

© Douglas J. Besharov 2007

Using all available government data, this paper calculates the actual, per-child costs of Head Start (including Early Head Start), child care provided under the Child Care and Development Fund (CCDF), and prekindergarten/preschool programs. Besides being substantially higher than often reported by the relevant government agencies, the resulting cost estimates show dramatic differences in costs per child among the three forms of education and care.

For 2003/2004, Head Start Bureau reported an average per-child cost of about \$7,222 per year.¹ This figure is apparently used by all analysts, inside and outside the government. However, it does not take into account other, substantial Head Start expenditures; represents the average per-child cost across all forms of Head Start, from part- to full-day, and from home-based to Early Head Start; and reflects the fact that Head Start is mostly a nine-month long program with about half the children in care for around four hours a day. (Unless otherwise indicated, all dollar amounts are in 2004 dollars.)

Vastly more decentralized than Head Start, the costs of child care under the CCDF also vary much more than do Head Start's. For example, in 2005, according to the National Association of Child Care Resources and Referral Agencies, the average cost of full-time, center-based child care for four-year-olds ranged from a low of about \$3,016 per child in Alabama to a high of about \$9,628 per child in Massachusetts (about \$2,917 per child and about \$9,312 per child, respectively, in 2004 dollars).²

The only recent national estimate that we have found comes from the Children's Defense Fund, which estimates that, in 2000, full-day child care for four-year-olds cost between about \$4,388 and about \$6,582 per year.³ These estimates, however, do not include administrative and quality spending under the CCDF nor the Child and Adult Care Food Program (CACFP) subsidy. They also ignore the cost differences between the different durations of CCDF-subsidized arrangements.

Recently, there has been a major expansion of school-based prekindergarten programs as well as state- and local-funded public and private preschool programs. The early care and education field has not settled on the term to be used for these non-Head Start educational services for preschoolers, alternating in usage between "preschool" and "prekindergarten" (or

¹U.S. Department of Health and Human Services (HHS), Administration for Children and Families, Head Start Bureau, "Head Start Program Fact Sheet: Fiscal Year 2004" (Washington, DC: HHS, 2005), <http://www.acf.hhs.gov/programs/hsb/research/2005.htm> (accessed December 20, 2006). This figure includes the children in Early Head Start.

²The National Association of Child Care Resources and Referral Agencies, *Breaking the Piggy Bank: Parents and the High Price of Child Care* (Arlington, VA: NACCRRA, 2006), http://www.naccrra.org/docs/policy/breaking_the_piggy_bank.pdf (accessed March 12, 2007).

³Karen Schulman, *Issue Brief: The High Cost of Child Care Puts Quality Care Out of Reach for Many Families* (Washington, DC: Children's Defense Fund, 2000).

“pre-K”).⁴ Because upwards of 90 percent of these children are in public school settings, for convenience, we call these “prekindergarten/preschool programs.”

According to the National Institute for Early Education Research (NIEER), in 2004/2005, total state spending on prekindergarten/preschool services was about \$2.84 billion, with average per-child spending of about \$3,551 (about \$2.75 billion and about \$3,435, respectively, in 2004 dollars). Of those states with a prekindergarten or preschool program, state spending varied substantially, from a low of about \$721 in Maryland to a high of about \$9,305 in New Jersey (about \$697 and about \$9,000, respectively, in 2004 dollars). Only twelve states had no prekindergarten or preschool programs.⁵ In the face of wide variation in what is considered full-time, full-year prekindergarten/preschool, we adopt the NIEER definition (that is, fifty hours per week for forty-nine weeks per year),⁶ and thus we also adopt its cost estimate.

According to our calculations (detailed in the accompanying Appendix), in 2003/2004, Head Start’s per-child cost for full-time, full-year care was about \$8.41 an hour (for three- to five-year-olds), compared to about \$3.52 for center-based child care (or its equivalent) under the CCDF, and about \$5.53 for state-funded prekindergarten/preschool programs. (See Table 1.)

Multiplying these hourly costs to estimate the cost of full-time, full-year care and education (fifty hours per week, forty-nine weeks per year) yields an average per-child cost for Head Start of about \$21,305 (about \$20,607 in 2004 dollars), for center-based child care of about \$8,908 (about \$8,616 in 2004 dollars), and for prekindergarten/preschool programs of about \$14,026 (about \$13,566 in 2004 dollars).

These estimates are based on somewhat incomplete data. However, even if one places a range or confidence interval of 10 or even 20 percent around these cost estimates, the policy-relevant story remains the same.

⁴See, for example, W. Steven Barnett and Kenneth B. Robin, “How Much Does Quality Preschool Cost?” (working paper, National Institute for Early Education Research, 2006), <http://nieer.org/resources/research/CostOfEffectivePreschool.pdf> (accessed December 20, 2006), using the two terms interchangeably by showing identical total state spending figures for both “2004–2005 preschool spending” and “2004–2005 state Pre-K spending at current cost” (in Tables 1 and 2, respectively).

⁵Barnett and Robin, “How Much Does Quality Preschool Cost?”

⁶In keeping with the approach adopted by the NIEER, we define full-time, full-year as fifty hours per week, forty-nine weeks per year, and part-time, full-year as twenty-five hours per week, forty-nine weeks per year. See National Institute for Early Education Research, “Cost of Providing Quality Preschool Education to America’s 3- and 4-year olds,” National Institute for Early Education Research, <http://nieer.org/resources/facts/index.php?FastFactID=5> (accessed June 8, 2007).

Table 1. Cost Comparisons: Head Start, Early Head Start, CCDF Child Care, and Prekindergarten/Preschool (2003/2004)

Cost	Head Start		CCDF		Pre-K/ Preschool
	Ages 3-5	Ages 0-2	Ages 3-5		Ages 3-4
	(HS)	(Early HS)	Center	Family	
Average per child (regardless of hrs)					
Head Start Bureau estimate	\$7,222	\$7,222			
Besharov/Myers estimate	\$9,381	\$15,999	\$8,100	\$7,225	
NIEER estimate					\$3,435
Part-day and full-day sessions					
Besharov/Myers estimate (part-day)	\$5,608				
Besharov/Myers estimate (full-day)	\$12,570				
Hourly (across all durations)	\$8.99	\$10.21	\$4.18	\$3.81	n/a
Hourly (full-time)	\$8.41	\$10.17	\$3.52	\$3.15	\$5.53
Hourly (part-time)	\$10.51	\$12.71	\$4.45	\$3.96	n/a
Full-time, full-year (50 hours/week, 49 weeks/year)	\$20,607	\$24,904	\$8,616	\$7,709	\$13,556

Sources: See discussion and references in Appendix.

APPENDIX

Head Start Costs	A-1
Total money spent on Head Start	A-1
Average per-child costs	A-2
Costs by hours and arrangements	A-3
Full-time, full-year costs.	A-5
Child Care under the CCDF	A-6
Average per-child costs	A-6
Full-time, full-year costs	A-12
Prekindergarten/preschool Programs	A-14
Average per-child costs	A-15
Full-time, full-year costs	A-15

Head Start Costs

Published estimates systematically understate Head Start's cost because they rely on incomplete and misleading data provided by the Head Start Bureau. Instead of the widely cited figure of about \$7,222, we estimate that Head Start's average cost per child in 2003/2004 was actually about \$9,667, and that a full year of full-time Head Start costs about \$20,607. (Unless otherwise indicated, all dollar amounts are in 2004 dollars.)

For the 2003/2004 program year, the Head Start Bureau reports an average per-child cost of about \$7,222.¹ To reach this figure, the bureau starts with program expenditures (about \$6.77 billion), subtracts spending on "support activities" (about \$232 million), and then divides the result by the number of slots officially funded at the beginning of the program year.

We think this is not the way to estimate Head Start's cost because it (1) does not include all the money spent by the program, (2) overstates the number of children in Head Start, and (3) ignores the cost differences between the different types and durations of Head Start arrangements.

Total money spent on Head Start. Any calculation of program costs should include all the expenditures made in support of the program. After all, the object is to determine what it costs to run the program. This should include the amounts spent on "support activities," such as "quality enhancements" to the program (about \$232 million). It should also include a 10 percent "match" of their budgets (compared to the statutory 20 percent)² that local grantees are required to provide in the form of additional funds or in-kind services (about \$753 million). And it should include the subsidies that Head Start providers receive under the Child and Adult Care Food Program (CACFP) (about \$1.053 billion³ in total or about \$1,106 per child).⁴ In theory, it should also include the cash value of the various medical and other services that grantees are supposed

¹U.S. Department of Health and Human Services, "Head Start Program Fact Sheet: Fiscal Year 2004."

²The implementation of the statutory matching requirement seems quite uneven, with the valuation of services apparently often inflated. Hence, on advice from Steven Barnett, of the NIEER, to be conservative, we apply a 10 percent national matching rate.

³This figure includes administrative costs, which we estimate using administrative expenditure figures from the annual USDA Budget Explanatory Notes for the Committee on Appropriations. In 2006, CACFP administrative costs totaled about \$136.9 million (or about six percent of total expenditures), which included about \$115.2 million sponsors' administrative costs, about \$19.2 million in sponsor audits, and about \$2.1 million for training and technical assistance. We then apply this percentage to the per-child costs derived from the USDA's reimbursement rate schedule. See U.S. Department of Agriculture, Food and Nutrition Service, "2008 Explanatory Notes," p. 27-48, <http://www.obpa.usda.gov/27-FNS.pdf> (accessed June 7, 2007).

⁴We assume a CACFP take-up rate of 100 percent because Head Start grantees are required to seek funds from the program, and that, as center-based care for children under poverty, the subsidy is at its maximum. See *Code of Federal Regulations*, title 45, sec. 1304.23(b)(1)(i), <http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=66b11b46226ab75d8324ca6d0ede0fd0&rgn=div8&view=txt&node=45:4.1.2.2.4.2.1.4&idno=45> (accessed March 16, 2007), stating: "(i) All Early Head Start and Head Start grantee and delegate agencies must use funds from USDA Food and Consumer Services Child Nutrition Programs as the primary source of payment for meal services. Early Head Start and Head Start funds may be used to cover those allowable costs not covered by the USDA."

to provide (through either outside funding or contributed services). But little is known about the extent or value of these services, so we ignore them for this calculation.

This fuller view of expenditures brings total spending on Head Start to about \$8.58 billion, about 27 percent higher than reported by the Head Start Bureau. (See Table 2.)

Table 2. Head Start Costs (2003/2004)

Cost	Ages 3-5	Ages 0-2
	(HS)	(Early HS)
Federal	\$6,096,909,000	\$677,000,000
State and other	\$674,860,811	\$77,795,744
Support activities (including quality funds)	\$208,455,300	\$23,161,700
CACFP	\$991,612,798	\$61,755,687
Total	\$7,740,220,910	\$839,713,132

Sources: See references throughout Appendix.

Average per-child costs. To derive the average cost per child, the Head Start Bureau divides the total program expenditures divided by the total enrollment of children (905,851)⁵ reported to be served in the federal awards to grantees issued in September of each year (the beginning of the Head Start program year). This is approximately what the Head Start Bureau calls “funded enrollment,” that is, the number of slots financed by some or all of the program’s annual funding sources as published in the Head Start “Fact Sheet.” (For 2003/2004, funded enrollment was 905,851 children.)

We, however, think that this overstates the number of children Head Start serves because it includes slots that may never have been filled or that may have become vacant as children dropped out of the program.

Hence, we use the average end-of-month enrollment figure from data in the Program Information Report (PIR), which we think more accurately reflects the number of children who are actually served by the program. In 2003/2004, average end-of-month enrollment was 895,268 children

⁵This figure represents ACF-funded slots only. Craig Turner, director of program management, Head Start Bureau, U.S. Department of Health and Human Services, personal communication to authors, April 6, 2007.

(842,781 for Head Start, and 52,487 for Early Head Start),⁶ about 1.2 percent less than funded enrollment.

Using our more complete estimate of Head Start spending and a better estimate of the number of children in Head Start results in an average cost of about \$9,667 for all children in Head Start⁷ (including children in Early Head Start) rather than \$7,222. After disaggregating, the cost for the children in regular Head Start is about \$9,382, and for Early Head Start, about \$15,999.

For Early Head Start, we estimate the average per-child cost by dividing total expenditures (including funds for support activities, local program match, and the CACFP—about \$840 million) by the number of children in the program (52,487 for end-of-month enrollment). We do not include the pregnant mothers who are in the program (5,896) because we do not know whether they receive extensive services. For 2003/2004, the result is an estimated per-child cost for Early Head Start of about \$15,999.

But that is regardless of the number of hours a child spends in Head Start, and regardless of whether the child is in a center or a home-based setting.

Costs by hours and arrangements. The Head Start Bureau does not provide cost estimates that distinguish between part-day and full-day programs, center-based and home-based programs, or by regular Head Start and Early Head Start. We estimate their respective costs by first estimating the number of children in each arrangement, then deriving an hourly cost for each arrangement, and lastly constructing an average per-child cost figure for each arrangement.

We derive the number of children in Head Start (both part- and full-day) from the 2003/2004 PIR. The PIR breaks down enrollment by center-based programs operating four and five days per week, and then by part- and full-day programs within those two categories (which it defines as “less than 6 hours per day” and “6 or more hours per day,” respectively). We then simply calculate a proportion of children in part- and full-day center-based programs based on those figures (about 46 percent and 54 percent, respectively).

To estimate hourly costs, we divide the estimated expenditures for part-day and full-day care (derived from the portion of spending on children in each, about 27 percent and about 73

⁶Authors’ calculation based on U.S. Department of Health and Human Services, Head Start Bureau, *Head Start Program Information Report for the 2003–2004 Program Year* (Washington, DC: HHS, 2005). The Head Start figure includes children in home-based Head Start, who, for our per-child cost calculation, we count at 3/4 the rate of center-based children. For the Early Head Start figure (52,487), we do not include the pregnant mothers who are in the program.

⁷For this weighted cost, we assume that the per-child cost of home-based Head Start is 25 percent less than the per-child cost of part-day, center-based Head Start. Craig Turner, director of program management, Head Start Bureau, U.S. Department of Health and Human Services, personal communication to authors, April 16, 2007.

percent, respectively) by their average durations (four and 7.1 hours for 156 and 197 days, respectively)⁸ multiplied by the number of children in each category.

Are per hour costs different for part-time vs. full-time Head Start? Some Head Start officials have told us that, for various reasons, including staffing patterns and facilities costs, there is little difference. Erring on the side of caution, however, we assume for this calculation that full-time hourly costs are 20 percent lower than part-time costs, reflecting various economies of scale.⁹ (We also assume that home-based Head Start costs 25 percent less than center-based Head Start.)¹⁰

On this basis, in the 2003/2004 program year, Head Start's hourly cost was about \$8.99 per child across full- and part-time arrangements (about \$8.41 for full-time Head Start and about \$10.51 for part-time Head Start), while Early Head Start's hourly cost was about \$10.21.

Adjusting for the cost difference between center-based and home-based Head Start leads to an estimate that part-day, center-based Head Start cost about \$5,608 per child and that full-day, center-based Head Start cost about \$12,570 per child. The figure for part-day, home-based Head Start was about \$4,206.

But these estimates are based on Head Start's definition of full-day care, which, at about seven hours, is about three hours less than what is usually considered full-time child care. And, they are for only the approximately nine-month Head Start program year.

⁸Craig Turner, director of program management, Head Start Bureau, U.S. Department of Health and Human Services, personal communication to authors, April 11, 2007, stating: "My best estimate, using data from the Grant application and Budget Instrument (GABI), is that the average part day is 4 hours and the average full day is 7.1 hours." We adopt Turner's estimate even though the program data we found from individual programs suggest that part-day arrangements are typically only about 3.5 hours per day. See, for example, California Riverside County Superintendent of Schools, "Head Start Program Service Options," Riverside County Office of Education, <http://www.rcoe.k12.ca.us/divisions/cfs/programs/hsimportant.html> (accessed March 13, 2007), stating: "[a] basic part-day preschool option . . . provides services for three and a half hours per day"; and Arizona State School Readiness Board, "Early Education in Arizona – Definitions & Framework," The Governor's Office for Children, Youth and Families, http://www.governor.state.az.us/cyf/school_readiness/documents/ECE%20definitions%20%20framework.pdf (accessed March 13, 2007), stating: "Head Start provides early education, most typically on a part-day basis (ex. 3.5 hours)."

⁹We are not sure, however, that there are *any* economies of scale for Head Start. As we explored the issue, we found that many of the facilities that Head Start currently uses would not be available for full-time use (some have two sessions already), that pay scales would have to change, and that many current staff would not want to work the longer hours, and so, as noted, we make the adjustment to be conservative. For these reasons, we do not assume further economies of scale when we estimate a full-time, full-year cost.

¹⁰Craig Turner, director of program management, Head Start Bureau, U.S. Department of Health and Human Services, personal communication to Peter Germanis, July 30, 2004.

Full-time, full-year costs. What would be Head Start's cost if it were expanded to be full-time, full-year like many child care programs? As described above, we calculate this cost for fifty hours per week, for forty-nine weeks per year, although others might select more hours per week for fewer weeks per year. Expanding Head Start's program period in that way would yield an average cost of about \$20,607 per child per year.¹¹ For Early Head Start, which is already about seven hours a day, the full-time, full-year cost would be about \$24,904 per child per year.

* * *

Sources:

For Head Start's calculation of annual per-child costs, see U.S. Department of Health and Human Services, Administration for Children and Families, Head Start Bureau, "Head Start Program Fact Sheet, Fiscal Year 2004," (Washington, DC: HHS, 2005), <http://www.acf.hhs.gov/programs/hsb/research/2005.htm> (accessed March 7, 2007).

For Head Start's total expenditures, authors' calculation based on U.S. Department of Health and Human Services, Administration for Children and Families, Head Start Bureau, "Head Start Program Fact Sheet, Fiscal Year 2004."

For the 20 percent matching requirement under the Head Start Act, see Alice Butler and Melinda Gish, *Head Start: Background and Funding*, CRS Report RL30952 (Washington, DC: Congressional Research Service, February 5, 2003), <http://usinfo.state.gov/usa/infousa/educ/files/rl30952.pdf> (accessed March 7, 2007).

For the amount of the CACFP subsidy, authors' calculation based on U.S. Department of Agriculture, Food and Nutrition Service, "Child and Adult Care Food Program: National Average Payment Rates, Day Care Home Food Service Payment Rates, and Administrative Reimbursement Rates for Sponsoring Organizations of Day Care Homes for the Period July 1, 2004–June 30, 2005," *Federal Register* 69, no. 135 (July 2004): pp. 42413–42415, <http://www.fns.usda.gov/cnd/Care/Publications/pdf/2005notice.pdf> (accessed March 13, 2007); and U.S. Department of Agriculture, Food and Nutrition Service, "Food Distribution Program: Value of Donated Foods from July 1, 2004 through June 30, 2005," *Federal Register* 69, no. 137 (July 2004): p. 42964, http://www.fns.usda.gov/fdd/regs/notices/SY05_CommodityMealRate.pdf (accessed March 14, 2007).

¹¹As noted above, we do not reduce hourly costs to reflect possible economies of scale in going from full-day care (about 7.1 hours per day) to full-time care (about 10 hours per day). The economies of scale that might result from such an increase in hours are too uncertain to be estimated (and are likely to be small).

Child Care under the CCDF

Vastly more decentralized than Head Start, the costs of child care under the Child Care and Development Fund (CCDF) also vary much more than do Head Start's. For example, in 2005, according to the National Association of Child Care Resources and Referral Agencies, the average cost of full-time, center-based child care for four-year-olds ranged from a low of about \$3,016 per child in Alabama to a high of about \$9,628 per child in Massachusetts (about \$2,917 per child and about \$9,312 per child, respectively, in 2004 dollars).¹²

The only recent national estimate that we have found comes from the Children's Defense Fund, which estimates that, in 2000, full-day child care for four-year-olds cost between about \$4,388 and about \$6,582 per year.¹³ The estimate we derive below is higher, because we count costs not typically included in such surveys, such as CCDF quality funds and the CACFP subsidy.

Average per-child costs. The U.S. Department of Health and Human Services does not publish an estimate for average annual subsidies per child under the CCDF,¹⁴ presumably because so many subsidized arrangements last for less than one year¹⁵ that such an estimate would require the kind of complex estimation procedure we describe below.

CCDF administrative data provide the average monthly payments to providers (which includes parental copayments) by arrangement. To derive an average per-child cost across all arrangements, we weight the average monthly payments by the number of children in each arrangement, resulting in an average monthly payment across all arrangements of about \$378.¹⁶ We multiply the resulting figure by twelve and then subtract from this amount the average

¹²The National Association of Child Care Resources and Referral Agencies, *Breaking the Piggy Bank*.

¹³Karen Schulman, *Issue Brief: The High Cost of Child Care Puts Quality Care Out of Reach for Many Families*.

¹⁴See U.S. Department of Health and Human Services, Administration for Children and Families, Child Care Bureau, *Child Care Development Fund (CCDF): Report to Congress* (Washington, DC: HHS, 2003), http://eric.ed.gov/ERICDocs/data/ericdocs2/content_storage_01/0000000b/80/27/fd/3a.pdf (accessed February 1, 2007).

¹⁵Marcia K. Meyers et al., *The Dynamics of Child Care Subsidy Use* (New York: The National Center for Children in Poverty, July 2002), <http://www.nccp.org/media/dcc02-text.pdf> (accessed February 1, 2007), stating: "The duration and stability of subsidy assistance varied across the five states [Illinois, Maryland, Massachusetts, Oregon, and Texas]. The median length of subsidy spells ranged from three to seven months, and the proportion of children returning to the subsidy system within 12 months ranged from 35 to 58 percent."

¹⁶Authors' calculations based on U.S. Department of Health and Human Services, Administration for Children and Families, Child Care Bureau, "ACF-801 FFY 2004 Sample Data," CD-ROM.

parental copayment per child (about \$437),¹⁷ which results in an average per-child cost of about \$4,096.

Because the CCDF provides payment data by provider, we can perform the same calculation for each major form of arrangement.¹⁸ In FFY 2004, combining full- and part-time care, the average per-child cost for children in center-based care was about \$4,385; for family-based care, about \$3,851; for relative-based care not in the child's home, about \$2,958; for relative-based care in the child's home, about \$2,714; and for non-relative care in the child's home, about \$3,034.¹⁹ (In this paper, we perform more detailed estimates only for children in center- and family-based care, not those in more informal settings, because the former are more akin to Head Start and prekindergarten/preschool settings.)

These figures, however, do not include (1) administrative and quality spending under the CCDF, (2) the Child and Adult Care Food Program (CACFP) subsidy, and (3) parental copayments. They also ignore the cost differences between the different durations of CCDF-subsidized arrangements.

To estimate administrative and quality spending, we take total spending in FFY 2004 (about \$9.380 billion)²⁰ and subtract payments to providers (about \$7.310 billion)²¹ less parental

¹⁷Authors' calculations based on U.S. Department of Health and Human Services, "ACF-801 FFY 2004 Sample Data," CD-ROM.

¹⁸For these calculations, like those for Head Start and for prekindergarten/preschool (later in this paper), we use the NIEER's definition of full-time, full-year care (that is, fifty hours per week, forty-nine weeks per year). See footnote 6, *supra*.

¹⁹Authors' calculations based on U.S. Department of Health and Human Services, "ACF-801 FFY 2004 Sample Data," CD-ROM. We calculate this figure by multiplying the average monthly CCDF payment to providers for three- to five-year-olds (about \$398 and about \$355 for center- and family-based care, respectively) by twelve, and then subtracting from the resulting figures the average parental copayment per child (about \$437 across all arrangements), resulting in average per-child costs of about \$4,339 for center-based care and about \$3,822 for family-based care.

²⁰U.S. Department of Health and Human Services, Administration for Children and Families, "Fiscal Year 2004 Child Care Development Fund: All Expenditures by State—Detailed Summary," *2004 CCDF State Expenditure Data*, http://www.acf.hhs.gov/programs/ccb/data/expenditures/04acf696/exp_detailed.htm (accessed March 13, 2007); and U.S. Department of Health and Human Services, Administration for Children and Families, "Combined Federal Funds Spent in FY 2004" *FY 2004 TANF Financial Data*, table A (Washington, DC: HHS, 2007), http://www.acf.hhs.gov/programs/ofs/data/2004/tableA_spending_2004.html (accessed March 14, 2007).

²¹Authors' calculations based on U.S. Department of Health and Human Services, "ACF-801 FFY 2004 Sample Data," CD-ROM. Values are imputed for cases missing valid information on provider payments or family copayments, assuming that these cases are distributed by state in the same proportion as those with valid information.

copayments (about \$758 million).²² To obtain an average amount per child, we divide the result (about \$2.829 billion) by the average monthly number of children in the program (about 1.738 million).²³ The result is about \$1,627 per child across all care arrangements. (In this paper, we assume that these costs are equal across all children.) Including administrative and quality costs raises the average per-child cost for center-based care to about \$6,012; for family-based care, to about \$5,478.

As mentioned above, children in child care are eligible for a food subsidy under the CACFP. The CACFP provides every child in the program with up to two reimbursable meals (breakfast, lunch, or supper) and one snack (or “supplement”) a day, or two snacks and one meal. Based on the USDA reimbursement rate schedule, for FFY 2004, the daily subsidy amount per child varied by family income level and by the duration of care (part- and full-time), from a low of about \$0.43 for a child in part-time, center-based child care (about \$112 per year) to a high of about \$4.25 for a child in full-time, center-based child care (about \$1,106 per year).²⁴

²²Authors’ calculations based on U.S. Department of Health and Human Services, “ACF-801 FFY 2004 Sample Data,” CD-ROM. In these data, parental copayments are included within provider payments, which we then separate from provider payments using data on the average monthly copayments per family.

²³U.S. Department of Health and Human Services, Administration for Children and Families, Child Care Bureau, “Average Monthly Adjusted Number of Families and Children Served (FFY2004),” *FY 2004 CCDF Data*, table 1 (Washington, DC: HHS, 2006), http://www.acf.dhhs.gov/programs/ccb/data/ccdf_data/04acf800/table1.htm (accessed February 1, 2006).

²⁴For children in center-based child care, the USDA categorizes the reimbursement rates by meal type (breakfast, lunch or supper, and supplement) and eligibility category (free, reduced price, and paid). In addition, the USDA provides child care centers with donated agricultural commodities (or “cash in lieu of” agricultural commodities) each day, which, in 2004, amounted to about \$0.17 per child. Although the USDA does not include the value of donated foods or, where applicable, cash in lieu of donated foods in its published reimbursement rates, we include them as part of our calculation of total daily CACFP costs for children in center-based child care.

In 2004, for children below 130 percent of poverty, the daily reimbursement rate to providers for breakfast was \$1.23 per meal; lunch or supper was \$2.24 per meal; and snack was \$0.61. For children between 130 and 185 percent of poverty, the daily reimbursement rate to providers for breakfast was \$0.93 per meal; lunch or supper was \$1.84 per meal; and snack was \$0.30. And for children above 185 percent of poverty, the daily reimbursement rate to providers for breakfast was \$0.23 per meal; lunch or supper was \$0.21 per meal; and snack was \$0.05.

For children in family-based care, the USDA also categorizes the reimbursement rates by meal type (breakfast, lunch or supper, and supplement) and eligibility category (Tier I and Tier II). For Tier I family-based care, which has to be either located in a low-income area, or the provider has a household income at or below 185 percent of the poverty level, the reimbursement rate to providers for breakfast was \$1.04 per meal; lunch or supper was \$1.92 per meal; and snack was \$0.57 per meal. For Tier II family-based care, which is for family-based arrangements that do not meet the criteria for Tier I, the reimbursement rate to providers for breakfast was \$0.39 per meal; lunch or supper was \$1.16 per meal; and snack was \$0.15.

Using these reimbursement schedules for center- and family-based care, we calculate the daily per-child costs of the CACFP subsidy by eligibility category and arrangement. For children below 130 percent of poverty in full-time, center-based child care, the daily reimbursement was about \$4.25 per child (about \$1,106 per year); for part-time

These figures, however, do not include the costs of administering the program, which, as described above, we estimate using administrative expenditure figures from the annual USDA Budget Explanatory Notes for the Committee on Appropriations.²⁵ Taking administrative costs into account, for center-based care, raises costs by about \$40 (about \$44 for full-time care, and about \$31 for part-time care); for family-based care, about \$20 (about \$21 for full-time care, and about \$15 for part-time care).

Apparently, there are no data on recent CACFP spending on children under the CCDF by both age and/or arrangement. As a result, and based on earlier studies,²⁶ we assume that take-up rates (1) decline as family income increases, and (2) are lower for family-based care. In 1999, for

care, it was about \$3.02 per child (about \$786 per year). For children between 130 percent and 185 percent of poverty in full-time, center-based child care, the daily reimbursement was about \$3.24 per child (about \$843 per year); for part-time care, it was about \$2.31 per child (about \$601 per year). Finally, for children above 185 percent of poverty in full-time center-based child care, the daily reimbursement was about \$0.66 per child (about \$172 per year); for part-time care, it was about \$0.43 per child (about \$112 per year).

For family-based care, the USDA publishes monthly administrative reimbursement rates for sponsoring organizations by four different levels, according to the number of homes that are sponsored by an organization.

The data on the exact number of sponsored homes in each level, however, are not available. We assume, based on the USDA's reimbursement rate schedule for the meals served in the Summer Food Service Program, that the administrative reimbursement rate is roughly 10 percent of the cost per meal, and we then add this amount to the daily cost per meal.

For children in Tier I, full-time, family-based care, including the administrative reimbursements, the daily reimbursement was about \$3.88 per child (about \$1,009 per year); for part-time care, which does not include breakfast, it was about \$2.74 per child (about \$712 per year). For children in Tier II, full-time family-based care, the daily reimbursement was about \$1.87 per child (about \$486 per year); for part-time care, it was about \$1.44 (about \$374 per year).

[For administrative reimbursement rates for sponsoring organizations, see U.S. Department of Agriculture, Food and Nutrition Service, "Child and Adult Care Food Program: National Average Payment Rates, Day Care Home Food Service Payment Rates, and Administrative Reimbursement Rates for Sponsoring Organizations of Day Care Homes for the Period July 1, 2004–June 30, 2005," *Federal Register* 69, no. 135 (July 2004): pp. 42413–42415, <http://www.fns.usda.gov/cnd/Care/Publications/pdf/2005notice.pdf> (accessed March 13, 2007); and for authors' calculation of the administrative reimbursement rate, see Authors' calculation based on U.S. Department of Agriculture, Food and Nutrition Service, "Summer Food Service Program (SFSP), 2007 Reimbursement Rates" (Washington, DC: U.S. Department of Agriculture, 2007), http://www.fns.usda.gov/cnd/summer/Administration/Policy/2007/SFSP_02-2007.pdf (accessed April 17, 2007).]

²⁵U.S. Department of Agriculture, Food and Nutrition Service, "2008 Explanatory Notes," p. 27-48.

²⁶See, for example, William L. Hamilton, Eric M. Stickney, Nancy R. Burstein, and Lawrence S. Bernstein, *Family Child Care Home Participation in the CACFP—Effects of Reimbursement Tiering: A Report to Congress on the Family Child Care Homes Legislative Changes Study*, report prepared for the U.S. Department of Agriculture (Washington, DC: Abt Associates, Inc., March 2002), p. 27, <http://www.ers.usda.gov/publications/efan02002/efan02002.pdf> (accessed March 20, 2007).

example, only about 29 percent of children under age six in a family day care home received a CACFP subsidy.²⁷ Although the adoption of tiered reimbursement rates in 1997 affected the distribution of subsidies for home-based child care, the new rules apparently have not had an appreciable effect on center-based care.²⁸

Hence, we assume that 80 percent of children in center-based care with family incomes below the poverty line receive a CACFP subsidy. (We assume that the take-up rate of the CACFP subsidy for family-based care is half that of center-based care.) We also assume that the take-up rate declines to 60 percent for those in families with incomes between 100 and 149 percent of poverty, to 40 percent for those in families with incomes between 150 and 199 percent of poverty, and to 20 percent for those with incomes between 200 percent of poverty and 85 percent of SMI.

Based on these estimates of CACFP utilization and including the CACFP subsidy (about \$710 per child for center-based care and about \$346 per child for family-based care, both of which include administrative costs),²⁹ the average per-child cost of center-based care in FFY 2004 was about \$7,601; for family-based care, about \$6,718.

The foregoing calculations are based on rough assumptions suggested by research dating back to the 1990s. Hence, we sought to verify them by performing an alternate calculation. To estimate the number of children who were subsidized by the CACFP, we first multiply the number of zero- to twelve-year-olds in center- and family-based CCDF arrangements by our assumed take-up rates of CACFP (80 percent and 40 percent, respectively), resulting in an estimate that about one-third of zero- to twelve-year-olds in CCDF were subsidized by the CACFP. To estimate total CACFP spending on these children, we then multiply the number of children in each arrangement subsidized by the CACFP by our estimated average per-child costs, which results in total spending on CACFP for zero- to twelve-year-olds under the CCDF of about one-third the reported CACFP spending. This alternate calculation produces a result that shows our

²⁷Ibid.

²⁸Fred Glantz, Abt Associates, Inc., personal communication to authors, March 13, 2007.

²⁹Authors' calculations based on U.S. Department of Agriculture, Food and Nutrition Service, "Child and Adult Care Food Program: National Average Payment Rates, Day Care Home Food Service Payment Rates, and Administrative Reimbursement Rates for Sponsoring Organizations of Day Care Homes for the Period July 1, 2004–June 30, 2005," *Federal Register* 69, no. 135 (July 2004): pp. 42413–42415, <http://www.fns.usda.gov/cnd/Care/Publications/pdf/2005notice.pdf> (accessed March 13, 2007); and U.S. Department of Agriculture, Food and Nutrition Service, "Food Distribution Program: Value of Donated Foods from July 1, 2004 through June 30, 2005," *Federal Register* 69, no. 137 (July 2004): p. 42964, http://www.fns.usda.gov/fdd/regs/notices/SY05_CommodityMealRate.pdf (accessed March 14, 2007); and U.S. Department of Agriculture, Food and Nutrition Service, "Child & Adult Care Food Program" (Washington, DC: U.S. Department of Agriculture, undated), <http://www.fns.usda.gov/cnd/care/CACFP/aboutcacfp.htm> (accessed March 15, 2007).

calculation of CACFP subsidies to be well within the enrollment and total spending figures reported for all children receiving CACFP subsidies under the CCDF.

As mentioned above, many states impose a required copayment on parents receiving CCDF subsidies. The required copayments can be as high as 10 percent of family income for poor families and sometimes higher for families with more income.³⁰ In FFY 2004, the average copayment under the CCDF for poor families was about 4.1 percent of family income (per family, not per child), including those families that did not make a copayment.³¹ When we add back into the cost of care these parental copayments (about \$437), the average per-child cost of center-based care for FFY 2004 rises to about \$8,100, and family-based care rises to about \$7,225.³²

Table 3. Child Care Costs under the CCDF (FFY 2004)

Cost	Ages 3–5
Provider payments (includes parental copayments of \$243,177,884)	\$2,611,920,446
Administrative and quality funds	\$905,375,174
CACFP	\$346,525,766
Total	\$3,863,821,386

Sources: See references throughout Appendix.

The foregoing calculations ignore cost differences between part- and full-time CCDF-subsidized arrangements.

³⁰U.S. Department of Health and Human Services, Administration for Children and Families, National Child Care Information Center, “Sliding Fee Scale,” Part III, Section 3.5 in *Child Care and Development Fund Report of State Plans for the Period of 10/01/99 to 9/30/01* (Washington: U.S. Department of Health and Human Services, 2002), <http://www.nccic.org/pubs/CCDFStat.pdf>, (accessed March 7, 2007), stating: “Co-payments are typically based on a percentage of family income, a percentage of the price of the child care, or a percentage of the State reimbursement rate.” Thirty-eight states set copayments on a percentage of the family income, often as much as 10 percent; five states set them as a percentage of the price of the child care; six states set them as a percentage of the state reimbursement rate; and one state allows but does not require counties to set copayments at between 9 and 15 percent of the family’s gross income.

³¹Authors’ calculations based on U.S. Department of Health and Human Services, “ACF-801 FFY 2004 Sample Data,” CD-ROM.

³²CCDF administrative data do not provide average per year parental copayments, but instead provide data for average monthly parental copayments per family. We divide this figure by the average number of children per family, and then multiply the result by twelve, giving us the 2004 average parental copayment per child.

Full-time, full-year costs. In order then to calculate the full- and part-time average cost per child for each category of care, we derive an hourly cost for each. To do so, we divide the annual average per-child cost (which includes administrative and quality costs, and parental copayments) by twelve, and then divide that result by the average monthly hours for the category of care. For center-based care, this results in an hourly cost of about \$3.33; and for family-based care, about \$3.12.

In the absence of any data on the subject, we assume modest economies of scale for full-time care, so that it costs 80 percent of part-time care. And we assume that full-time, full-year care is fifty hours per week, forty-nine weeks per year and that part-time, full-year care is twenty-five hours per week, forty-nine weeks per year.

For full-time, *center-based care*, this results in an average hourly cost of about \$3.20, and an average annual cost of about \$7,841 per child; for part-time care, the figures were about \$4.00 and about \$4,901 per child, respectively. For full-time, *family-based care* the average hourly cost was about \$2.99 per child, and the average annual cost was about \$7,332 per child; for part-time care, the figures were about \$3.74 per child and about \$4,583 per child, respectively. Finally, we add the CACFP subsidy to the part- and full-time costs. For center-based care, this results in a full-time, average cost of about \$8,616 per child (about \$4.18 per hour); for part-time, the figure was about \$5,451 per child (about \$4.45 per hour). For family-based care, the full-time, average cost was about \$7,709 per child (about \$3.15 per hour); for part-time care, about \$4,853 per child (about \$3.96 per hour).

* * *

Sources:

For the average per-child costs for three- to five-year-olds receiving CCDF assistance in 2003/2004, authors' calculations based on U.S. Department of Health and Human Services, Administration for Children and Families, Child Care Bureau, "ACF-801 FFY 2004 Sample Data," CD-ROM.

For the administrative and quality spending under the CCDF, authors' calculation based on: U.S. Department of Health and Human Services, Administration for Children and Families, Child Care Bureau, "2004 CCDF State Expenditure Data," Expenditures in FY 2004 by Appropriation Year Table 1, 2006, http://www.acf.hhs.gov/programs/ccb/data/expenditures/04acf696/fy04_overview_allyears.htm (accessed March 13, 2007); U.S. Department of Health and Human Services, Administration for Children and Families, "TANF Financial Data," Combined Federal Funds Spent in FY 2004 Table A, 2005, http://www.acf.hhs.gov/programs/ofs/data/2004/tableA_spending_2004.html (accessed March 14, 2007); U.S. Department of Health and Human Services, Administration for Children and Families, Child Care Bureau, "ACF-801 FFY 2004 Sample Data," CD-ROM; and U.S. Department of Health and Human Services, Administration for Children and Families, Child Care Bureau, "Average Monthly Adjusted Number of Families and Children Served (FFY2004)," FY 2004 CCDF Data Tables and Charts Table 1, 2006, http://www.acf.dhhs.gov/programs/ccb/data/ccdf_data/04acf800/table1.htm (accessed March 7, 2007).

For the amount of the CACFP subsidy, authors' calculation based on U.S. Department of Agriculture, Food and Nutrition Service, "Child and Adult Care Food Program: National Average Payment Rates, Day Care Home Food Service Payment Rates, and Administrative Reimbursement Rates for Sponsoring Organizations of Day Care Homes for

the Period July 1, 2004–June 30, 2005,” *Federal Register* 69, no. 135 (July 2004): pp. 42413–42415, <http://www.fns.usda.gov/cnd/Care/Publications/pdf/2005notice.pdf> (accessed March 13, 2007); and U.S. Department of Agriculture, Food and Nutrition Service, “Food Distribution Program: Value of Donated Foods from July 1, 2004 through June 30, 2005,” *Federal Register* 69, no. 137 (July 2004): p. 42964, http://www.fns.usda.gov/fdd/regs/notices/SY05_CommodityMealRate.pdf (accessed March 14, 2007).

For the estimate of parental copayments, authors’ calculations based on U.S. Department of Health and Human Services, Administration for Children and Families, Child Care Bureau, “ACF-801 FFY 2004 Sample Data,” CD-ROM.

Prekindergarten/preschool Programs

Recently, there has been a major expansion of school-based prekindergarten programs as well as state- and local-funded public and private preschool programs. The early care and education field has not settled on the term to be used for these non-Head Start educational services for preschoolers, alternating in usage between “preschool” and “prekindergarten” (or “pre-K”).³³ Because upwards of 90 percent of these children are in public school settings, for convenience, we call these “prekindergarten/preschool programs.”

State spending on these prekindergarten/preschool programs, which serve mostly low-income children,³⁴ increased greatly over the last decade and a half. Comparing estimates from the Children’s Defense Fund and the National Institute for Early Education Research (NIEER), it appears that state spending on these programs about tripled between the 1991/1992 and 2004/2005 school years, going from about \$939 million³⁵ to about \$2.84 billion (about \$2.75 billion in 2004 dollars).³⁶

Because of the mixed nature of prekindergarten/preschool services and funding, there are no nationwide administrative data on expenditures or the number of children in care. For these data, the field instead relies on surveys of the staff in the state agency responsible for administering the state prekindergarten/preschool program (usually the Department of Education) by the NIEER.³⁷

According to the National Institute for Early Education Research (NIEER), in 2004/2005, total state spending on prekindergarten/preschool services was about \$2.84 billion, with average per-child spending of about \$3,551 (about \$2.75 billion and about \$3,435, respectively, in 2004

³³See, for example, Barnett and Robin, “How Much Does Quality Preschool Cost?” using the two terms interchangeably by showing identical total state spending figures for both “2004–2005 preschool spending” and “2004–2005 state Pre-K spending at current cost” (in Tables 1 and 2, respectively).

³⁴The National Institute for Early Education Research, *The State of Preschool: 2004 State Preschool Yearbook*, <http://nieer.org/yearbook2004/pdf/yearbook.pdf> (accessed March 22, 2007), stating: “Most states targeted their programs to low-income children and children with other background factors that place them at risk for starting school behind their peers.”

³⁵Karen Schulman, Helen Blank, and Danielle Ewen, *Seeds of Success: State Prekindergarten Initiatives 1998–1999* (Washington, DC: Children’s Defense Fund, 1999), p. 31.

³⁶Barnett and Robin, “How Much Does Quality Preschool Cost?” In the absence of 2003/2004 data, we use data from the 2004/2005 school year, as suggested by Barnett.

³⁷W. Steven Barnett, Jason T. Hustedt, Kenneth B. Robin, and Karen L. Schulman, *The State of Preschool: 2005 State Preschool Yearbook* (New Brunswick, NJ: The National Institute for Early Education Research, 2005), <http://nieer.org/yearbook/pdf/yearbook.pdf> (accessed March 7, 2007).

dollars). Of those states with a prekindergarten or preschool program, state spending varied substantially, from a low of about \$721 in Maryland to a high of about \$9,305 in New Jersey (about \$697 and about \$9,000, respectively, in 2004 dollars). Only twelve states had no prekindergarten or preschool programs.³⁸

Average per-child costs. How much does a year of prekindergarten/preschool cost? In the absence of other readily available data, we borrow the calculations performed by the NIEER for what it calls “quality preschool.” It estimates the 2002 cost of quality preschool (what we would call “quality prekindergarten/preschool”) for three- and four-year olds using the average per-child costs projected by the National Center for Education Statistics (NCES) for K–12 public school, or about \$9,240.³⁹

But that would only cover school hours during the school year. To estimate the cost of what it calls quality “full day year-round preschool” (using as its measure fifty hours a week for forty-nine weeks or 2,450 hours a year), the NIEER adds to that the cost of wrap-around child care (about \$4,316), for a total cost of about \$13,556 per year.

Full-time, full-year costs. In the face of wide variation in what is considered full-time, full-year prekindergarten/preschool, we adopt the NIEER definition (that is, fifty hours per week for forty-nine weeks per year),⁴⁰ and thus we also adopt its cost estimate.

By the way, the NIEER also develops an estimate of the total cost of providing universal prekindergarten/preschool nationally by assuming that “1/3 [are] taking a half-day program only during the school year, 1/3 [are] in a full day program during the school year, and 1/3 [are] in a full-day program year round.”⁴¹ Using the number of three- and four-year-olds in 2000, it estimates a total cost of about \$72 billion and an average per-child cost for quality prekindergarten/preschool of about \$9,139.

³⁸Barnett and Robin, “How Much Does Quality Preschool Cost?”

³⁹National Institute for Early Education Research, “Cost of Providing Quality Preschool Education to America’s 3- and 4-year olds.” This figure includes the CACFP subsidy as well as facilities and capital costs. Steven Barnett, director, National Institute for Early Education Research, personal communications to authors, April 10, 2007 and June 19, 2007.

⁴⁰See footnote 6, supra.

⁴¹National Institute for Early Education Research, “Cost of Providing Quality Preschool Education to America’s 3- and 4-year olds.”

* * *

Sources:

For the estimate of the per-child cost of prekindergarten/preschool, authors' calculation based on figures cited in National Institute for Early Education Research, "Fast Facts: Cost of Providing Quality Preschool Education to America's 3- and 4-year olds," <http://nieer.org/resources/facts/index.php?FastFactID=5> (accessed December 14, 2006).

For total state spending on prekindergarten/preschool, see W. Steven Barnett and Kenneth B. Robin, "How Much Does Quality Preschool Cost?" (working paper, National Institute for Early Education Research, 2006), <http://nieer.org/resources/research/CostOfEffectivePreschool.pdf> (accessed December 21, 2006).