

CHILD CARE FUNDING & FINANCE IN PENNSYLVANIA:

*Budgeting for Survival or
Paying for the True Cost of Quality?*

TECHNICAL APPENDIX

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Della Moran • Joshua Lin • Ashley Campbell • David Lapp



RESEARCH
for ACTION

WHERE DID THIS DATA COME FROM? HOW DID YOU COLLECT YOUR DATA?

CENTER-SPECIFIC FINANCIAL, ENROLLMENT, AND STAFFING DATA

Source: Centers self-reported their own data. Two sites gave financial statements to the researchers for entry into the data collection template and then confirmed the correct entry of numbers. Two sites filled out the data collection template independently, but numbers were then corroborated with audited financial statements given to the researchers.

Collection: We created a data collection template in order to standardize financial and enrollment data from all of our centers.

SALARY COMPARISON DATA

Sources: Center-level data was collected directly from each center. All salary data used for comparison to center-level data were available publicly from the Pennsylvania Department of Education¹ and the U.S. Bureau of Labor Statistics.²

Collection: Center-level salary data was collected in a data collection template. Publicly-available raw datasets were downloaded from the agencies' websites.

REIMBURSEMENT RATE DATA

Source: The Pennsylvania Office of Child Development and Early Learning (OCDEL) provided this data upon request.

Collection: Child Care Works (CCW) average reimbursement rates by age group for each of the six centers in our sample were provided in a spreadsheet. Actual average Pre-K Counts and Head Start reimbursement rates were not available by center, so statewide averages and maximum reimbursement rates were used.

HOW WERE THE SALARY COMPARISONS CALCULATED?

First, each center was matched to a local school district and metropolitan statistical area (MSA) (Table 1). For centers with multiple sites in different counties, we selected the site with the largest enrollment.

¹ Pennsylvania Department of Education, "2015-16 Professional Personnel Individual Staff Report" [Dataset], accessed May 29 2017, <http://www.education.pa.gov/Data-and-Statistics/Pages/Professional-and-Support-Personnel.aspx#tab-1>.

² U.S. Bureau of Labor Statistics, "Labor Force Statistics from the Current Population Survey: Earnings by education" [Dataset], accessed May 29 2017, <https://www.bls.gov/cps/earnings.htm#education>.

Table 1. Center matching to local school district and metropolitan statistical area.

Center #	Headquarter county	Local school district	Metro statistical area
1	Beaver	New Brighton Area SD	Pittsburgh
2	Allegheny	Pittsburgh SD	Pittsburgh
3	Blair	Altoona Area SD	Altoona
4	Luzerne	Pittston Area SD	Scranton—Wilkes-Barre—Hazleton
5	Montgomery	Lower Merion SD	Montgomery County-Bucks County-Chester County Metropolitan Division
6	Philadelphia	Philadelphia City SD	Philadelphia Metropolitan Division

Salary data was then collected from each center, the Pennsylvania Department of Education, and the U.S. Bureau of Labor Statistics (see Question 1, above).

Mean and median salaries were collected or calculated at three unit levels (i.e., ECE center-level, local school district-level or metropolitan statistical area, and Pennsylvania state-level) and for three different levels of education (i.e., associate degree, bachelor's degree, and master's degree holders). A description of the cleaning and calculation process is described below by data source.

- Center-provided data
 - Centers had the option of providing salary information in one of two ways:
 - (1) Provide the total wages paid to teaching staff, disaggregated by education level (high school diploma, associate degree, bachelor's, and master's). Average annual salaries were then calculated by dividing total wages expense by the number of FTE employees.
 - (2) Provide minimum and maximum hourly wages by level of education, which were then averaged to calculate an approximate median hourly wage. This hourly wage was then multiplied by 2,080 (40 hours per week for 52 weeks) to reach an approximate annual salary.
- Pennsylvania Department of Education (PDE)
 - PDE provides salary data at the individual staff level. Salaries were averaged weighted by FTE and collapsed by local school district, highest degree, and assignment (pre-kindergarten, kindergarten, or grades 1-3 regular education teachers only).
 - If the district had more than five teachers with a pre-kindergarten assignment,

then only pre-kindergarten teachers were included in the average calculation. Otherwise, kindergarten teacher salaries were also used.

- In two districts, there were fewer than five pre-kindergarten and kindergarten teachers with master's degrees, so grade 1 through 3 teachers were included in the average salary calculations for master's degrees only.
- U.S. Bureau of Labor Statistics (BLS)
 - PDE does not provide salary information for teaching staff with associate degrees, who typically hold Instructional Aid positions. Median associate degree wages in the field of education for the metropolitan statistical area were used as a proxy for the local school district's associate degree wages.
 - Pennsylvania state median wages in all fields disaggregated by level of education were simply extracted from BLS data.

HOW WERE THE DAILY REIMBURSEMENT RATES PER CHILD CALCULATED?

Reimbursement rates differ by program and by child's age. Infant, toddler, and school-age children are only eligible to receive CCW reimbursements, which were provided to the researchers at the center level by OCDEL (see Question 1, above).

Head Start programs pay centers per contracted seat, and the exact payment per seat differs according to the center's contract. OCDEL provided the researchers with an average Head Start reimbursement rate for all Pennsylvania centers.

Pre-K Counts daily reimbursement rates were calculated by taking the annual maximum reimbursement of \$8,500 and dividing by 180 program days.

"Pre-K Counts plus CCW" reimbursement rates were calculated by adding (1) the maximum yearly Pre-K Counts reimbursement total, (2) a full-day CCW reimbursement rate for 90 days (summer program length), and (3) a half-day CCW reimbursement rate for 180 days (school year program length), and then dividing by 270 annual program days. This calculation assumes that a typical preschool student is in programming for six to eleven hours during the school year and for at least five hours during the summer.

HOW WAS THE COST PER DAY PER CHILD CALCULATED?

Expenses and enrollment headcounts for the 2015-16 fiscal year were reported by the six sites in our sample. Enrollment headcounts were converted to an estimated full-time equivalency (FTE) enrollment by counting each full-time school age child as 60% of an FTE student and counting part-time students as 50% FTE. Full-time school age children were set at 60% FTE because they attend program full-time for one-third of the year (the summer), and part-time during the other two-thirds (the school year).

To calculate the cost per day per child, the total expenditures were divided by the number of program days (270), and then divided by the FTE enrollment.

HOW WAS “COST OF QUALITY” CALCULATED?

The cost of quality was defined by two target quality assumptions:

1. Quality could be improved by increasing teacher wages for associate-, bachelor’s-, and master’s-degree holders to be competitive with the local school district or metropolitan area.
2. Although all of the centers complied with state-mandated adult-to-child ratios, quality could be improved by decreasing adult-to-child ratios according to National Association for the Education of Young Children (NAEYC)-recommended ratios.

First, a target number of FTE teachers was projected according to the center’s enrollment and the NAEYC-recommended ratios. This target number of FTE teachers was divided among the four education levels—high school diploma, associate, bachelor’s, and master’s—according to the center’s current staff makeup. For example, if 50% of the center’s FTE teaching staff held associate degrees, 50% of the target staff would also hold associate degrees.

Then, for associate, bachelor’s, and master’s degree-holders, the average teacher’s salary at the center was compared to the average teacher’s salary in the local school district. If the school district’s salary was higher, a cost with NAEYC-recommended staffing levels and competitive wages (i.e., the cost of quality) was calculated by multiplying the target number of teachers at that education level by the school district’s average salary. If the school district’s salary was lower than the center’s, then the center’s current average salary was used to calculate the cost of quality.

This total cost of quality was divided by the FTE enrollment (see Question 3) and by 270 program days in order to get the cost of quality per day per child.

Note that teachers with high school diplomas were not factored into the cost of quality calculation; in other words, the cost of quality assumes that high school diploma-holders will maintain the same wage as they do currently, though staffing levels may increase due to the NAEYC-recommended ratios.

HOW WAS THE COST PER DAY PER CHILD CALCULATED BY DIFFERENT AGE GROUPS (INFANTS, TODDLERS, PRESCHOOL, AND SCHOOL AGE)?

We assumed that the differential costs between age groups would be driven by the number of teachers required to staff each groups’ classrooms. Each center’s total number of FTE teaching staff was divided proportionally into each of the four age groups according to the center’s

child-to-adult ratios. The number of teachers required for each age group was then multiplied by the average teacher's salary. Then, the remaining expense (e.g., facilities, administrative salaries, and supplies) were divided proportionally according to each age group's FTE enrollment. These two numbers were summed to create a total yearly expense for each age group.

The total yearly expense for each age group was then divided by the FTE enrollment in that age group and by 270 program days to estimate the cost per day per child in each age group. For each center, we calculated the cost per day per child for each age group as a percentage of the school age cost per day per child. These percentages were then averaged across all the centers for which we had financial data on to arrive at the aggregate numbers presented.

HOW WAS THE DIFFERENCE BETWEEN REVENUES AND COSTS BY AGE GROUP CALCULATED?

For each center and for each age group, we calculated the percent difference between daily reimbursement rates and costs per child per day, with the cost per child per day as the base number, i.e., % Difference between Revenue and Cost = $(\text{Revenue} - \text{Cost}) / (\text{Cost})$.

These percent differences were then averaged across all of the centers for which we had financial data.



Land Title Building • 100 South Broad Street, Suite 700 • Philadelphia, PA 19110

267-295-7760 •  www.researchforaction.org •  www.twitter.com/Research4Action