

Montana Child Care Cost Model

USER GUIDE

February 2024

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About Prenatal to Five Fiscal Strategies

Prenatal to Five Fiscal Strategies is a national initiative, founded by Jeanna Capito and Simon Workman, that seeks to address the broken fiscal and governance structures within the prenatal to five system with a comprehensive, cross-agency, cross-service approach. The initiative is founded in a set of shared principles that centers on the needs of children, families, providers, and the workforce. This approach fundamentally rethinks the current system to better tackle equity in funding and access.

For more information about P5 Fiscal Strategies, please visit: www.prenatal5fiscal.org

Introduction

Cost estimation models, or cost calculators, are tools to understand the true cost of delivering early care and education and how that cost varies based on different program or child characteristics. These tools are flexible financial models that estimate the costs to deliver care by incorporating both data and assumptions to project the expected costs incurred by child care providers under a variety of different scenarios and policy conditions. This is a powerful tool that policymakers and advocates in Montana can use to understand the cost of child care and the impact of policy decisions, and that child care providers can use to understand the fiscal impact of different program characteristics.

Prenatal to Five Fiscal Strategies (P5FS) was engaged through Zero to Five Montana to develop this cost calculator for Montana, building on the Cost of Care Calculator developed by the Montana Department of Public Health and Human Services (DPHHS) to support programs in the STARS quality rating and improvement system. Led by national early childhood finance experts Jeanna Capito and Simon Workman, P5FS has developed cost estimation models and cost calculators for several states and communities. These models have informed child care subsidy rate setting and other early childhood policies and are aligned with cost model guidance provided by the U.S. Office of Child Care for rate setting under the Child Care Development Block Grant.

Model Development

Prenatal to Five Fiscal Strategies worked with Zero to Five Montana to convene a Child Care Cost Model Workgroup to guide and inform development of the Montana child care cost model. This workgroup included representatives from the Montana DPHHS, Zero to Five, and child care provider from across the state. P5FS presented the model at the Montana Child Care Business Summit in September 2023 and piloted the tool with several providers following the summit.

Many factors were considered in developing the model and are embedded within the model functionality, including child care licensing regulations, core program characteristics and quality enhancements, and available data on child care expenses and revenue sources. The model includes all aspects of program operations for center-based and family child care settings, serving children from birth to 12 years of age with full day, full year child care. To account for the differing business models and cost drivers, specific cost model settings were built for center and family child care (FCC) settings. Details of the models include:

- Full day is defined as 10 hours per day.
- Full year is 52 weeks.
- All Montana State licensing standards <u>child care centers</u> and <u>family and group child care homes</u> are met through program operations included in the model.
- Licensing standards set the definitions of the ages of children in each category.
- Additional variables may be manipulated by the user, in addition to the base licensing standards.

The models' output includes estimates of total revenues and expenses at the provider level and at the individual child level to fully illuminate variations in expenses/revenues for different ages of children. Expense data in the models is designed to incorporate the following factors that impact the cost of providing care:

- Health, safety, and licensing requirements, including required staff qualifications and trainings;
- Staffing patterns to meet licensing and increase quality and staffing outside of child services, for full program operations;
- Staff and FCC provider compensation (salary and benefits);

- Enhanced quality variables including curriculum and supplies, staff time for family engagement, planning for teaching and learning, and inclusion supports;
- Enrollment levels;
- Ratios and group size;
- Facility size.

Nonpersonnel expense data in the model is based on the federal <u>Provider Cost of Quality Calculator</u>. This calculator includes estimates of all primary nonpersonnel expenses, such as educational and office supplies, and occupancy costs, with cost-of-living variations for each state. Personnel data in the model is based on either the Bureau of Labor Statistics Occupational Employment and Wage Statistics for Montana, or the Massachusetts Institute of Technology Living Wage Calculator. Salary assumptions are detailed later in this manual. All data and model functionality were shared with and reviewed by the Child Care Cost Model Workgroup.

Cost Estimation Model Functionality

The Montana child care cost model has many opportunities for customization and input based on the cost of care questions the user is seeking to answer. Throughout the model, cells that can be changed by users are shaded yellow. To model different center and family child care profiles, the user can change the data entered in these cells either by using the drop down or typing over the data in the yellow cell.

The model is designed such that the INPUT tab provides both the key inputs related to program characteristics and program enhancement selections and presents the cost per child results. Additional tabs in the workbook include source data related to revenues, salaries, ratios, and quality enhancements. The public versions of the models include only the INPUT tabs, which provide the user with the ability to modify program characteristics, enhancements, and revenue sources, and be presented with results on a program wide and cost per child basis for centers or family child care homes, as well as several pre-populated visualizations of results.

Program Characteristics

Settings for the key program variables are entered on the INPUT tab. Different settings generate a wide range of situations. Each variable is explained below.

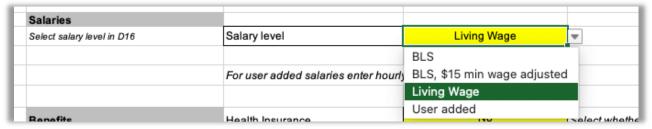
Star level: Several data points in the model are informed by the Star to Quality rating of the modeled program. Users can select the star level in cell E1.

Size of Center: Size is represented as the number of classrooms by age range. The number of children in each classroom is determined by staff-to-child ratios and group-size requirements for licensed programs. Users can also enter their own ratio and group size data in the relevant cells in columns H and I to the right.

SIZE of CENTER							
Age Groups	# Children/Age	Ratios	Group size	# of Classrooms		User Input RATIO	User Input GROUP SIZE
Infant/Toddler (0-23 mos)	12	4	12	1	To override default	0	0
2-3 years	16	8	16	1	ratio and group size,		0
3-5 year-olds	24	10	24	1	enter new values in columns H and I here>	0	0
School age	32	14	32	1		0	0
TOTAL Children	84	то	TAL Classrooms	4			

Family Child Care Home Enrollment: The FCC model allows users to run scenarios for a program serving up to 12 children. Users can input the number of children in each age group served by the home. The model will automatically identify the number of staff needed to comply with licensing regulations based on the number and ages of children being served.

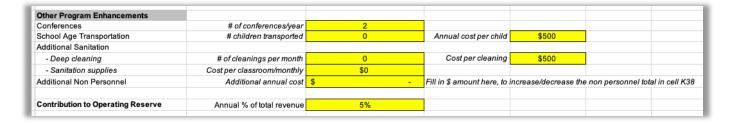
Salary: The models allow users to select from several pre-populated salary scales, which are discussed in detail in the <u>next section</u> of this manual. In addition to the pre-populated scales, users can also enter a salary of their choosing by selecting "User entered" from the drop-down menu and then entering a salary for the different positions in the columns to the right.



Benefits: Users can select if the program offers employer-paid discretionary benefits, such as a contribution to health insurance, at different levels. The model includes default values at \$5,000, \$7,500, and \$10,000 per employee. In addition, data from the <u>Kaiser Family Foundation</u> on the average employer contribution to employee health plan in Montana is included as an option. The selected value gets applied to all staff in the program, providing a total expense amount for benefits that can be used by the program to meet the needs of employees. Users can also enter a percentage employer contribution to a retirement plan and can select the number of sick and paid leave days offered to employees.

Program Enhancement Variables

Users can choose from several program enhancement variables to estimate the cost of child care that meets standards beyond state licensing, including those aligned to Best Beginnings Stars to Quality. Each variable has default data that can be overridden by the user.



 Family Engagement: Select whether the program offers family engagement conferences and how many each year. The cost on providing substitute coverage for the teacher to engage in the conference, assuming 2 hours per child per conference (to cover the conference and preparation).

- *Transportation:* Users can select if the program offers transportation to children. Users can note how many children are transported, and the annual cost per child of that transportation.
- Sanitation: Cleaning expenses are included in nonpersonnel expenses by default, however users
 can also include the cost of additional sanitation such as a monthly deep cleaning and additional
 costs of sanitation supplies.

Nonpersonnel Expenses

The cost model includes the typical nonpersonnel expenses found in child care centers and family child care homes. These fall into the following broad categories for centers:

Education Program for Children and Staff, which includes:

- *Education/Program—Child*: Food/food related, classroom/child supplies, medical supplies, postage, advertising, field trips, family transportation, child assessment materials.
- Education/Program—Staff: Professional consultants, training, professional development, conferences, staff travel
- *School-age transportation*: Cost of providing transportation for school-age children to/from their grade school.

Occupancy: Rent/lease or mortgage, real estate taxes, maintenance, janitorial, repairs, and other occupancy-related costs

Program Management and Administration: Office supplies, telephone, internet, insurance, legal and professional fees, permits, fundraising, memberships, administration fees.

Similar categories are used in the family child care home setting:

Nonpersonnel – Admin/Office: This category includes expenses such as advertising, insurance, legal and professional fees, office supplies, and repairs, maintenance, and cleaning of the space used for child care.

Nonpersonnel – Program (calculated per child): This category includes classroom supplies, medical supplies, food, and educational supplies. This amount varies based on the number of children in the program.

Occupancy – Shared Use of Business and Home: Home-based businesses may count a certain percentage of their occupancy costs as business expenses, including rent/lease/mortgage costs, property taxes, homeowners insurance, utilities, and household supplies. The model follows Internal Revenue Service Form 8829 to estimate a time-space percentage for how these expenses apply to the business.

The default values are drawn from the Provider Cost of Quality Calculator, which adjusts national data for the cost of living in Montana. Users can opt not to use the default values but instead enter their own nonpersonnel data by selecting "User Entered" in the drop down and then populated the cells in column E.

Revenue

To accurately project revenues for the program, users can enter the number of children at each age level who receive a child care subsidy. The private tuition column will automatically update with the

balance of enrollment not covered by public funds. The programs Stars to Quality rating level informs the subsidy rate. Users can also select if the program receives the 'high-growth county' subsidy adjustment which provides a 15% increase to state subsidy rates for programs in Flathead, Ravalli, Missoula, Gallatin, L & C, and Yellowstone counties. To calculate revenue from tuition, users enter tuition rates in the cells in column F. Note: The revenue table must be changed when the size of a center or enrollment number of the FCC home is changed, and values must not be negative.

Some centers and homes may have revenue from other sources such as through grants, fundraising events, etc. This is included as a revenue line and can be entered by the user as a total annual amount. Users can also indicate if the program participates in the federal Child And Adult Care Food Program, or CACFP, to cover some or all of the cost of providing food to children in the program.

Enter # of children by age receiving each ty	pe of subsidy using YELLOV	V cells only in the table	below. Private Tuition tal	b must not be a negative
	State child care subsidy	Private Tuition		Monthly Tuition Rates
Infant/Toddler (0-23 mos)	1	7	5 /	\$ 1,500.00
2-3 years	1	15	Enter your monthly tuition rates, by age of child, here>	\$ 1,200.00
3-5 year-olds	1	23		
School age	1	31		\$ 800.00
Total =	4	76		
Percent subsidy =	5%			
High-growth county, subsidy differential	Yes	Yes (includes a 15% increase on subsidy rates for programs in Flathead, Ra		rograms in Flathead, Ravalli, M
CACFP - Food Program	Yes	Indicate if the program participates in the federal Child and Adult Care Food P		
Other income (fill in any other annual income, such as fundraising or grants)	\$ 10,000.00			

Efficiency: No program is 100% full 100% of the time. To accurately capture the true revenue that programs receive to help cover their costs, the user can modify the percent of enrollment efficiency – which is how full the program is on average across the year – and the bad debt – which is how much of expected revenue is not collected. Industry defaults are 85% enrollment efficiency and 3% bad debt.

Model Output

Once the user has made selections in the cost model, the tables below the revenue input provide the results for the chosen scenario. The first table provides Program Level results, summarizing the total number of staff and the number of teaching staff. Results for the primary expense and revenue categories are displayed along with an estimate of the total annual revenue after expenses, displayed as both a dollar amount and a percentage of total expenses.

The additional results tables show the estimated cost per child, by age group, as annual, monthly, and weekly figures. The orange table displays the current subsidy rate and then the green table calculates the gap between the estimated cost per child and the subsidy rate.

The cost per child calculation in FCC homes does not provide a different cost for infants, toddlers, and preschoolers, due to the program operating as one single group of children. School-age cost per child is lower to account for the annualized reduced number of hours that school-age children require child care.

	14.9	
	11.9	
		Percent of expense
\$	888,624	63%
\$	180,770	13%
\$	1,069,394	76%
e	166 871	12%
		5%
		2%
		1%
	0,557	0%
		0%
	275 632	20%
		5%
\$	1,412,278	
\$	122,595	
\$	902,400	
\$	-	
\$	8,252	
\$ \$	8,252 -	
	8,252 - 1,033,247	
\$	-	
\$	1,033,247	
\$ \$	1,033,247 185,984	
	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ 888,624 \$ 180,770 \$ 1,069,394 \$ 166,871 \$ 70,327 \$ 30,104 \$ 8,331 \$ - 5 \$ 275,632 \$ 67,251 \$ 1,412,278 \$ 902,400

Results - Cost per C	hild (CPC)	Annual	Monthly	Weekly	
Ir	nfant/Toddler (0-2	\$28,067	\$2,339	\$540	
2	-3 years	\$20,275	\$1,690	\$390	
3	-5 year-olds	\$17,640	\$1,470	\$339	
S	chool age	\$10,241	\$853	\$197	
Subsidy rates, per c	hild	Annual	Monthly	Weekly	
	nfant/Toddler (0-2	\$12,285	\$1,024	\$236	
2	-3 years	\$12,285	\$1,024	\$236	
3	-5 year-olds	\$10,920	\$910	\$210	
S	chool age	\$6,552	\$546	\$126	
Gap - subsidy/true c	ost, per child	Annual	Monthly	Weekly	
Ir	nfant/Toddler (0-2	(\$15,782)	(\$1,315)	(\$303)	
2	-3 years	(\$7,990)	(\$666)	(\$154)	
3	-5 year-olds	(\$6,720)	(\$560)	(\$129)	
S	chool age	(\$3,689)	(\$307)	(\$71)	

Cost Estimation Data Inputs

Staffing and personnel expenses

Personnel calculations are based on a standard staffing pattern typical of most centers and family child care homes, with the following assumptions:

Non-teaching staff

- Director or Family Child Care Owner/Provider (1 full time)
- Assistant Director or Program Supervisor (0.5FTE if enrollment is less than 30, 1FTE if over 30)
- Administrative Assistant (0.5FTE if enrollment is less than 30, 1FTE if over 30)

Teaching staff

The number of teachers and assistant teachers is driven by state ratio and group size regulations. Each classroom has a lead teacher, with additional staff counted as assistant teachers in order to meet ratio requirements. In addition, the model includes 0.2 FTE per classroom teaching staff to allow for coverage throughout the day for breaks and opening/closing. This reflects that the program is open more than 40 hours per week and must always maintain ratios, which requires additional staffing capacity. The model also includes the cost of substitutes to cover for staff to attend required training.

In family child care homes, the owner/lead teacher is the only staff member unless licensing regulations call for an assistant. Higher quality ratios and group sizes may be added for family child care homes, modeling a smaller group size and more limited number of younger children in the group.

Waaes

Wages are driven by the salary choice chosen by the user on the INPUT page. Three salary scales are included by default, one of which has regional variations:

- 1. **Bureau of Labor Statistics:** The U.S. Department of Labor <u>Bureau of Labor Statistics</u> collects salary data for over 800 professions, with state-specific data published each year. The model includes child care positions for Montana.
- 2. **Bureau of Labor Statistics \$15 Adjustment:** The model also includes an option to adjust the BLS values to meet a \$15 minimum wage, with other salaries adjusted accordingly to mitigate wage compression.
- 3. **Living Wage:** The Massachusetts Institute of Technology (MIT) <u>Living Wage Calculator</u> estimates the wage needed by a household to meet basic needs, accounting for county-specific variations in cost of living. P5FS developed a wage scale for Montana with a living wage floor, using the MIT Living Wage Calculator. The assistant teacher and administrative assistant position is included at this floor, with other positions adjusted proportionally to account for increased job responsibilities.

Table 1: Default salary data included in Montana child care cost model

	Bureau of Labor Statistics	Bureau of Labor Statistics- Adjusted for \$15/hour floor	Living Wage
Director	\$48,950	\$57,675	\$98,974
Asst Director	\$39,160	\$46,140	\$81,796
Lead Teacher	\$32,750	\$38,588	\$67,046
Asst Teacher	\$26,480	\$31,200	\$51,574
FCCH Owner/ Provider	\$45,031	\$53,058	\$92,189
FCCH Asst Teacher	\$26,480	\$31,200	\$51,574

Notes: The MIT Living Wage values vary based on family composition. The study team developed a composite living wage based on the typical family size of early childhood educators in another state where this data was available (it was not available for Montana). This allowed for the calculation of a living wage for Montana, adjusted for family composition, which is used in the child care center model for the lowest paid members of the workforce, namely the assistant teacher and aide/floater. This is also used for the assistant teacher in the home-based model. Salaries for other staff positions are computed based on this living wage, increased to account for the additional job responsibilities. This increase is based on data collection in similar studies P5FS has conducted in several other states to understand the spread between pay of the different members of the early childhood workforce. For family child care provider/owners, the same hourly rate as is used for a lead teacher in a center setting is used, but this hourly wage is multiplied by 2,860 hours to calculate an annual salary based on a 55-hour work week for the provider/owner.

Source: P5FS analysis of data from (A) MIT Living Wage Calculator, available at https://livingwage.mit.edu/states/30 (last accessed October 2023); (B) U.S. Department of Labor, Bureau of Labor Statistics, May 2022 Occupational Employment and Wage Statistics Montana, available at: https://www.bls.gov/oes/current/oes_mt.htm (last accessed July 2023) .

Mandatory and Discretionary Benefits

All mandatory expenses related to employees are built into the model. These include federal and state requirements, including unemployment insurance and workers compensation. FICA-Social Security is included at 6.2%, Medicare at 1.45%, unemployment insurance at 1.0%, workers compensation at 2%.

The number of paid sick days and paid leave days can be adjusted on the INPUT tab. The model includes the cost of additional staff in the form of substitutes to cover this paid time off.

Users can select if the program offers employer-paid discretionary benefits, such as a contribution to health insurance, at different levels. The model includes default values at \$5,000, \$7,500, and \$10,000 per employee. In addition, data from the <u>Kaiser Family Foundation</u> on the average employer contribution to employee health plan in Montana is included as an option (\$6,602 per FTE). The selected value is applied to all staff, providing a total expense amount for benefits that can be used by the program to meet the needs of employees. Users can also enter a percentage employer contribution to a retirement plan and can select the number of sick and paid leave days offered to employees.

Users can also enter a percentage of retirement benefits contribution, paid by the employer. This could be contribution to an employer-provided retirement plan, or a dollar amount that is provided to the employee for this purpose. By default, this is set at five percent.

Nonpersonnel Expenses

Center-based

Nonpersonnel costs are aggregated into three categories:

Education Program for Children and Staff, which includes:

- Education/Program—Child: Food/food related, classroom/child supplies, medical supplies, postage, advertising, field trips, family transportation, child assessment materials.
- Education/Program—Staff: Professional consultants, training, professional development, conferences, staff travel
- *School-age transportation*: Cost of providing transportation for school-age children to/from their grade school.

Occupancy: Rent/lease or mortgage, real estate taxes, maintenance, janitorial, repairs, and other occupancy-related costs

Program Management and Administration: Office supplies, telephone, internet, insurance, legal and professional fees, permits, fundraising, memberships, administration fees

Family Child Care Homes

Nonpersonnel costs in the family child care home model align with the expense categories that home-based providers report on their federal taxes (Internal Revenue Service Schedule C). These expenses are broken out into:

Nonpersonnel – Admin/Office: This category includes expenses such as advertising, insurance, legal and professional fees, office supplies, and repairs, maintenance, and cleaning of the space used for child care.

Nonpersonnel – Program (calculated per child): This category includes classroom supplies, medical supplies, food, and educational supplies. This amount varies based on the number of children in the program.

Occupancy – Shared Use of Business and Home: Home-based businesses may count a certain percentage of their occupancy costs as business expenses, including rent/lease/mortgage costs, property taxes, homeowners insurance, utilities, and household supplies. The model follows IRS Form 8829 to estimate a time-space percentage for how these expenses apply to the business.

In addition, both models include a contribution to an operating reserve fund. This is intended to cover the cost of annual contributions to an operating reserve fund—a practice that contributes to long-term financial sustainability. The amount is set at 5% by default but can be modified by the user.

Table 2 details the nonpersonnel values used in the model by default:

Table 2: Non-personnel expenses

Expense Category	Child Care Center	Family Child Care Home
Education Program Expenses	\$1,987 per child	\$989 per child
Occupancy*	\$17,582 per classroom	\$561 per child
Program Management and Administration	\$358 per child	\$610 per child

^{*}Note: occupancy costs in FCCH are the amount of occupancy expenses that are allocated to the operation of the child care business, which is based on shared business expenses and a time-space calculation.

Revenue

The model includes three revenue sources by default.

Child Care Subsidy

2023 child care subsidy reimbursement rates are included in the cost model. In addition to base licensing rates, tiered reimbursement rates, which are higher rates payable to programs meeting different Star levels are also included in the model. Full rate details are available here.

Private Tuition

For children who are not in families eligible for child care subsidy, the model calculates revenue based on tuition rates. The tuition rates must be entered on the Input tab.

Child and Adult Care Food Program

The model can include revenue from the federal Child and Adult Care Food Program (CACFP). The model uses the number of children receiving subsidy to determine the proportion of children that are covered by free, reduced price, or paid rates for CACFP. The model uses the 2023-2024 CACFP rates, which can be found here, and assumes breakfast, lunch, and two snacks.

In addition, users can enter additional revenue in the "additional income" line to reflect grants, donations, or other revenue the user wants to include in the revenue estimate.

Using the models to answer common questions

The model can be used to run many scenarios to answer questions related to the true cost of child care. Below are several examples of scenarios that can be ran in the models.

• Impact of program size

- In the Center based scenarios, users can change the number of classrooms in the program, and then compare results with a large, small, or medium size program.
- In the FCC-based scenarios, the number of children can also be modified, within licensing regulations. The model can show the true cost per child if a program chooses to serve less than licensed capacity.

Impact of ages served

Modifying the types of classrooms included in the model can demonstrate the impact on the
cost of care when a program serves infants and toddlers, or when a program only serves infants
and toddlers, or a program with or without school-age children being served.

Impact of smaller group sizes

 Modifying the ratio and group size inputs in the model can demonstrate how the cost of care is impacted when programs operate with smaller ratios or group sizes than required by licensing, either due to space constraints or voluntarily so as to provide more individualized care and instruction.

• Impact of different salary levels and inclusion of benefits

- With personnel expenses accounting for around 70% of the total expenses in a child care program, the salary and benefits chosen in the model have a significant impact on the cost of care. Changing the Salary selection in the model or entering your own salary options in the User selected area, can demonstrate the impact on the cost of care with different salary levels.
- Similarly, the model can demonstrate the impact when the program covers the cost of health insurance and offers paid time off to staff.

• Impact of enrollment fluctuations and failure to collect expected revenue

No program is 100% full 100% of the time, but programs can implement policies that promote
close to full enrollment and maximize collection of expected revenues. By changing the
enrollment efficiency and bad debt percentages the model can demonstrate the impact on
program net revenue when enrollment is less than staffed capacity or when the program fails to
collect family fees or expected public subsidies.

Impact of revenue mix

- The number of tuition paying children and the number of children who are eligible for child care assistance can be modified in the model to demonstrate the impact of different mixes of income. When private pay tuition rates are higher than child care subsidy rates, programs often have to find a balance in how many subsidy-eligible children they can serve while still covering their costs. The model can help demonstrate the fiscal impact on programs of serving a higher or lower percentage of subsidy-eligible children.