

# Home Visiting Cost Model Narrative

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## Table of Contents

<b>Home Visiting Cost Model Narrative .....</b>	<b>1</b>
I. Introduction .....	2
II. Review of the available literatures .....	2
III. Data Sources & Approach .....	3
IV. Limitations and Challenges .....	4
V. Cost Components of Home Visiting .....	5
VI. Cost Components of Doula .....	12
VII. Cost Components of Family Connects .....	15
VIII. Cost Components of Coordinated Intake for Home Visiting .....	19
VIV. Conclusion .....	23

## I. Introduction

To support the cost modeling of the early childhood system being undertaken as a deliverable of the Preschool Development Block Birth through Five Grant (PDG B-5), the Ounce of Prevention with support from the Maternal Infant and Early Childhood Home Visiting (MIECHV) team at the Governor's Office of Early Childhood (GOECD), endeavored to estimate the cost of providing voluntary, accessible, comprehensive home visiting services throughout the state of Illinois. The services included in this cost model include 1) core intensive home visiting services; 2) embedded doula services; 3) Family Connects Illinois; and 4) coordinated intake for home visiting.

However, beyond the PDG B-5 deliverable, this cost model can serve as a tool for policy decision making at all levels as private and public partners work grow and sustain the statewide home visiting system. In particular, this cost model can serve to inform work under the Prenatal to Three Initiative (PN3), as well as future discussions around early childhood financing through the Governor's office. As such, the figures within are subject to amendment as changes in the field, as well as in conversations about financing, emerge.

The following narrative is designed to explain the methodological assumptions, limitations, and decisions that underlie the figures included in the home visiting cost model.

## II. Review of the available literatures

In constructing this cost model, a review was conducted of the few available studies of the average cost of providing home visiting services, agnostic of funding stream or home visiting model.

Source	Study Geographic Range	Sample Size # of LIAs	Total Per Slot Cost
Washington Department of Children, Youth and Families (WA DYCF)	Washington	39	\$ 6,547**
Health Resources and Services Administration (HRSA)	National	45	\$ 8,497
Mathematica Policy Research and Chapin Hall (EBHV)	National	25	\$ 7,344*

\*Inflation-adjusted from 2012 to 2019 dollars

\*\*This is the cost of direct services provided by the local implementing agency (LIA), and excludes the costs of administrative supports and performance-based contracting that are set out as requisites for an expansion of home visiting in WA. **The full cost used for the expansion projection by WA DCYF is \$8,727 per slot.**

*Source: Opportunities and Considerations for Expanding Home Visiting Services in Washington State (Washington DCYF Report)*

As referenced in the section V on home visiting saturation, the Washington Department of Children, Youth, and Families released a report in 2019 on the potential expansion of home visiting services statewide. The costs of expanding home visiting were based on an analysis of all state-funded LIAs in SFY19, applied to a "blended rate" applicable across home visiting models, representative of a projected

portfolio of 44% Nurse Family Partnership, 40% Parents As Teachers, and 20% Promising Practice services. The cost estimation also includes a breakdown of the direct service, administrative support, and performance-based contracting costs associated with an ideal expansion of home visiting services.<sup>1</sup>

*Source: Standardized Cost Estimates for Home Visiting: Pilot Study of the Home Visiting Budget Assistance Tool (HV-BAT)*

To address the lack of data on the cost of home visiting services, and to overcome barriers to cost collection and associated inconsistent estimates from prior studies, researchers with the United States Department of Health and Human Services Health Resources and Services Administration (HRSA) recently developed the Home Visiting Budget Assistance Tool (HV-BAT) as a uniform tool for collecting data on home visiting costs. The tool is programmed in Excel, with hidden formulas to calculate costs by category, as well as to account for geographic and other variations by Local Implementation Agency. Though the HV-BAT itself is not yet publicly available, HRSA researchers piloted the tool with 45 LIAs across 14 states; the results of this study indicate that the HV-BAT provides an approach to standardize cost data collection for home visiting programs, and further that there may be significant economies of scale for home visiting services.<sup>2</sup>

*Source: Costs of Early Childhood Home Visiting: An Analysis of Programs Implemented in the Supporting Evidence-Based Home Visiting to Prevent Child Maltreatment Initiative (EBHV)*

Mathematica Policy Research and Chapin Hall at the University of Chicago conducted a study of home visiting agencies implementing different evidence based models, published in 2014.<sup>3</sup> Through a uniform approach, the study examined costs among agencies during a set time frame, and assessed the annual cost of providing services, the allocation of costs across various budget categories, the cost of providing services to a family, and variations in average costs across models and agency characteristics. The study sample included 25 agencies across 13 states, delivering home visiting through the Healthy Families America, Nurse Family Partnership, Parents as Teachers, SafeCare, and Positive Parenting Program (Triple P) models.

### III. Data Sources & Approach

The cost model utilized for the development of this analysis applied the fairly straightforward “ingredient” method, which involves identifying the ingredients or cost components for a particular intervention and assigning a time-limited cost-value on each resource.<sup>4</sup> Members of the Ounce of Prevention Illinois Policy Team (IPT) worked to identify cost components of core, intensive home visiting services, and vetted these ingredients with Ounce of Prevention Illinois Birth to Three Institute (IBTI) staff, members of the MIECHV team at the Governor’s Office of Early Childhood Development, and the Home Visiting Task Force (HVTF).

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<sup>1</sup> *Opportunities and Considerations for Expanding Home Visiting Services in Washington State* - 2019, Washington State Department of Children, Youth, and Families, 8 Mar. 2019. [www.dcyf.wa.gov/sites/default/files/pdf/reports/HVReport2019.pdf](http://www.dcyf.wa.gov/sites/default/files/pdf/reports/HVReport2019.pdf).

<sup>2</sup> Yarnoff, Benjamin, et al. "Standardized Cost Estimates for Home Visiting: Pilot Study of the Home Visiting Budget Assistance Tool (HV-BAT)." *Maternal and child health journal* 23.4 (2019): 470-478.

<sup>3</sup> Burwick, Andrew, and Heather Zaveri. *Costs of early childhood home visiting: An analysis of programs implemented in the supporting evidence-based home visiting to prevent child maltreatment initiative*. Mathematica Policy Research, 2014.

<sup>4</sup> Levin, Henry M., and Patrick J. McEwan. *Cost-effectiveness analysis: Methods and applications*. Vol. 4. Sage, 2000.

## *Regionalization*

In order to account for regional variations in cost, with particular attention to deviations in salary associated with higher costs of living in the Greater Chicago area, this study examined home visiting and associated costs for 1) Cook and collar counties, and 2) Downstate Illinois. While further disaggregation of survey and budget information by program location may have yielded more precise information about cost variation by geography, the decision to regionalize costs in this manner was driven by a desire to fit the cost model to the broader early childhood cost model being constructed for PDG B-5.

## *Data Sources*

Data collected for this analysis consisted largely of home visiting program budgets, supplemented with survey responses from several programs. De-identified budgets were obtained from 10 MIECHV home visiting programs, 4 of which were in Cook and Collar counties and 6 were Downstate. Program budgets were provided for 8 home visiting programs funded by the Ounce of Prevention Fund. Of these 8 programs, 7 were in Cook and collar counties and 1 was Downstate. Based on the recommendations of Lesley Schwartz, GOECD, surveys were sent to a variety of home visiting programs which blend funds from multiple sources and implement a range of program models. Survey responses were collected from 10 programs, 6 in Cook and collar counties and 4 Downstate. Of the 10 survey respondents, 8 programs also sent in program budgets.

Budget figures for programs with embedded doulas were obtained from 13 programs. Where doulas were embedded in home visiting program budgets, only the doula-related salary information was entered. For stand-alone doula programs, personnel and non-personnel costs were removed from the budgets. De-identified budgets were also obtained for 3 MIECHV Coordinated Intake stand-alone programs, 1 of which was in Cook and Collar counties and 2 were Downstate. A statewide mean salary for Coordinated Intake workers was obtained from early analysis of the forthcoming 2019 MIECHV Continuous Quality Improvement Survey, conducted by the Center for Prevention Research and Development at the University of Illinois, Champaign. Finally, a sample budget was provided by Family Connects International and used as a reference for cost estimates of a universal newborn support program.

## **IV. Limitations and Challenges**

Due to the expedited timeline of the home visiting cost model further survey research or stakeholder interviews were not conducted. Lacking funding for this cost model project, researchers were also unable to offer gift cards or other incentives to survey respondents, as is sometimes done when soliciting information from home visiting programs.

Another challenge faced was in the variation in how program interpret and report costs in the line items of their budgets. While the HV-BAT study offered technical assistance to their survey respondents to ensure uniform reporting of costs, time limitations prevented conducting interviews or other extensive follow up with program staff. However, further follow-up to this cost analysis could include linking the program budgets in the study sample to identifying information, which would allow for analysis of the variations in costs across home visiting models.

Study authors also relied on budget information, as it was more readily available than actual expense information. As a result, estimates may be missing certain unaccounted costs, or expenses that programs “fill in” with supplemental funds. Recommended versus actual salaries were utilized with the goal of being better able to represent the true cost of providing home visiting services, inclusive of adequate compensation and staffing patterns.

Another limitation stems from the small sample size. While budget and salary data were gathered from 32 total programs, those were split between Downstate and Cook and Collar county programs, resulting in relatively small sample numbers for each regional estimate. To account for this challenge, several cross-model home visiting cost studies were reviewed with specific attention to 1) the overall per slot per year costs of delivering services and 2) the relative share of costs accounted for by each resource-category.

## V. Cost Components of Home Visiting

**The figures and calculations described in this section can be found in sheet 1 of the accompanying spreadsheet.**

### *Home visiting slots or the “Per child per year” cost estimate*

The home visiting models primarily implemented in Illinois, which include Healthy Families Illinois, Parents as Teachers, Early Head Start Home-Based Option, and Nurse Family Partnership, do not deliver services on a per child per year basis. Instead, the duration of services as well as program intensity vary by model, as do the home visitor caseload determination formulas which take into account family or household needs and risks. However, the decision was made to produce a per child per year cost of services to ensure this cost model could be incorporated into the broader early childhood cost model being developed as part of the PDG B-5 work. While these “slots” do represent family or household participation, for the purposes of calculating saturation they are instead hinged on the total count of children served by a typical program in one year.

The one-year figure is however, not too different from the estimates used in other available cost models. In a 2014 analysis by Mathematica Policy Research,<sup>5</sup> home visiting programs in the study sample enrolled families for an average of 44 weeks, spending \$6,583 on that family (2014 dollars). In a 2019 study by researcher with the U.S. Department of Health and Human Services Health Resources and Services Administration, estimations were based on the cost of providing services to one family on a one-year basis. Finally, while the Washington state Department of Children, Youth, and Families currently counts home visiting slots as the capacity of a program to serve a single household for a home visiting model's full duration, costs are reported out on the yearly basis.<sup>6</sup>

### *Personnel*

As noted above, estimates of average salaries were obtained through a review of program budgets as well as surveys of home visiting programs across models, and around the state. The positions integral to providing core home visiting services, agnostic of the model, were identified by the Illinois Policy Team and vetted both internally by the Birth to Three Program and Policy team, as well as externally by GOECD.

Observed Home Visiting Salaries, Exclusive of Fringe	Downstate Salaries	Cook and Collar Counties Salaries
Supervisor	\$ 48,989	\$ 53,837

<sup>5</sup> Burwick, Andrew, and Heather Zaveri. *Costs of early childhood home visiting: An analysis of programs implemented in the supporting evidence-based home visiting to prevent child maltreatment initiative*. Mathematica Policy Research, 2014.

<sup>6</sup> *Opportunities and Considerations for Expanding Home Visiting Services in Washington State* - 2019, Washington State Department of Children, Youth, and Families, 8 Mar. 2019. [www.dcyf.wa.gov/sites/default/files/pdf/reports/HVReport2019.pdf](http://www.dcyf.wa.gov/sites/default/files/pdf/reports/HVReport2019.pdf).

Home Visitor	\$ 34,672	\$ 35,752
Program Director	\$ 60,963	\$ 70,517
Administrative position	\$ 28,742	\$ 33,167
Community partnerships and engagement	-	\$ 40,000
Group coordinator	\$ 36,504	\$ 40,478

Home visiting experts in Illinois have consistently noted that low salaries are a contributing factor to the high turnover observed in the home visiting field. To account for this system-wide compensation issue, and to align the salary figures in this analysis with the estimates for school and center-based child care in the broader early childhood cost model, data were gathered on actual salaries which were adjusted to reflect the recommended compensation levels in the final cost model.

Educational attainment of Home Visitors* in OunceNet** as of 8/19/19	Percent of Workforce
HS Degree or Less	8%
Some college	25%
BA	46%
BA+	22%

\*Active Family Support Worker (FSW) only

\*\* Total (N) of 105

Educational attainment of Home Visiting Workforce* 2018 MIECHV CQI report**	Percent of Workforce
HS Degree or Less	8%
Some college	9%
BA	59%
BA+	21%

\*Across entire MIECHV workforce: home visitors, supervisors, Coordinated Intake workers, etc.

\*\*Total (N) of 80

As indicated by surveys of the MIECHV home visiting workforce<sup>7</sup> and active home visitors in the Illinois Birth to Three Institute's OunceNet database, a substantial share of the workforce has a Bachelor's degree or higher. For this reason, and through consultation with the Illinois Birth to Three Institute, a decision was made to set home visitor salaries at the same level as a BA teacher, per the salary scale being used in the broader cost model.

Recommended home visitor salaries were tied to the salaries for the community partnerships and engagement position as well as group coordinator salaries, based on the assumption that these roles demand similar levels of educational attainment and experience. The administrative position (data collection/entry) salary was set at the recommended salary for an administrative assistant. To produce an estimate of the desired salaries for home visiting supervisors, authors calculated the average increase from the existing to the desired salaries of the other home visiting positions, for the Downstate (9%

<sup>7</sup>MIECHV Home Visiting and Continuous Quality Improvement Survey Report SFY 2018  
<https://cprd.illinois.edu/files/2019/04/2018-HV-CQISurveyReportFinal.pdf>

increase) and Cook and Collar Counties (23% increase) regions. This percent increase was then added to the existing base salary.

Personnel in Early Childhood Salary Scale	Downstate Recommended Salary	Cook and Collar Counties Recommended Salary	Notes on salary adjustments
Supervisor	\$ 53,398	\$ 66,220	Downstate: base salary X 1.09 Cook and Collar Counties: base salary X 1.23
Home Visitor/Parent Educator	\$ 41,650	\$ 52,000	Teacher BA
Program Director	\$ 63,750	\$ 75,000	Site Director (PI/PFA)
Administrative position (data collection/entry)	\$ 29,750	\$ 35,000	Administrative Assistant
Community partnerships and engagement	\$ 41,650	\$ 52,000	Teacher BA
Group coordinator	\$ 41,650	\$ 52,000	Teacher BA

Staffing ratios were determined based on a combination of budget/survey data, and adjustments by the Illinois Birth to Three Institute based on best-practices. The average home visiting program across the Downstate and Cook and Collar County sample had 5 FTE home visitors. In the cost model spreadsheets, staffing ratios are scaled up based on the number of FTE home visitors. Staffing ratios were not regionalized, as best practice staffing patterns should not differ dramatically by program location.

Home visiting staffing ratios (based on 5 HV FTE)	% FTE
Supervisor	1.00
Home Visitor/Parent Educator	5.00
Program Director (do not scale)	0.20
Administrative position (data collection/entry)	0.30
Community partnerships and engagement (do not scale)	0.30
Group coordinator (do not scale)	0.30

### *Fringe*

In the program budgets sampled for this analysis, fringe was often reported as a percent of salary costs, and did not typically include a breakdown of the benefits included. For programs that did specify the components of their fringe rate, benefits included FICA, unemployment and workers compensation, and long term disability and health insurance. Because there was an observed difference in the fringe rates of Downstate programs and programs in Cook and Collar Counties, regionalized averages were included in the final estimations of cost. The regionalized fringe rate was multiplied by the total salary cost and then added to this salary-exclusive total to calculate the overall total personnel costs.

Average Fringe as percent of Total Personnel Costs	Downstate	Cook and Collar Counties	State Median* Fringe
	27.7%	23.0%	25.35%

\*Not weighted to account for regional share of services

#### *Non-personnel costs*

To standardize variations in non-personnel costs in programs of varying sizes, the share of each program's budget dedicated to various cost components was determined. From this data authors then calculated a percent breakdown of program budgets. The similar breakdowns reported in the EBHV and HV-BAT studies were also used as a comparison to ensure that the observed cost allocations in the program sample were relatively consistent with the existing literature. Within both the Downstate and Cook and Collar County samples, personnel costs accounted for a larger share of overall program budgets, and that indirect and contractual costs were lower among this sample.

Cost Categories	Downstate	Cook and Collar Counties	EBVH (2014)	HV-BAT (2019)
Total Personnel (including fringe)	82%	77%	72%	73%
Indirect	7%	7%	8%	13%
Occupancy (do not scale)	2%	5%	4%	Included in indirect
Supplies	2%	4%	3%	3%
Travel	3%	1%	Included in other	2%
Other (includes training)	1%	1%	6%	3%
Equipment	1%	1%	1%	1%
Contractual	2%	4%	6%	6%

Dollar figures for non-personnel costs were computed by adjusting the total personnel costs of programs, across each level of scale, relative to the percent associated with each non-personnel cost component. As in the personnel section, certain cost components like occupancy were set at the average amount for a program with 5 FTE home visitors and were not scaled up. Formulas in the cost model spreadsheets were imputed to allow the total cost category values to change as edits are made to either the salary figures or the cost category ratios.

#### *Infant and Early Childhood Mental Health Consultation*

Infant and Early Childhood Mental Health Consultation (IECMHC) was not listed as a line item in the majority of the program budgets in this sample; consultation services are provided by MIECHV to their grantee programs as a non-budgeted quality component, and other programs may not have funds available to regularly support IECMH consultation. However, IECMH, which strengthens providers ability to support and foster nurturing environments that enable healthy child development, is a core component of quality early childhood programs, and should be included as an additional professional support to all home visiting programs.

The Illinois Association for Infant Mental Health (ILAIMH) is currently undertaking its own cost modeling exercise to better understand the true costs of consultative services. Per Illinois State Board of



Education (ISBE) guidance, IECMH consultants can earn \$75-\$300 per hour. In this cost model, salaries were therefore set at of \$200 per hour. Best-practice guidance from the ILAIMH suggests that each program should receive 12 hours of consultation per month. *Service levels/caseloads*

Home visitor caseloads vary by model, though each of the evidence-based models implemented in Illinois carries some form of guideline or restriction on the number of families that can be served by 1 FTE home visitor at a single point in time. While HomVee states that home visitors had caseloads of 15 to 25 families (four studies)<sup>8</sup> Healthy Families America requirements for caseloads are based on family need (points system) with a maximum of 25 families per home visitors. Per the National Home Visiting Resource Center 2018 yearbook, home visitors typically maintain a caseload of 15 to 22 families, depending on the families' level of need.<sup>9</sup> NFP requires that a full-time nurse home visitor carry a caseload of at least 25 clients.<sup>10</sup> Early Head Start home visitors are required to maintain a caseload of 10 to 12 families<sup>11</sup>

Across the sample, the average number of children/families served by 1 FTE home visitor in a year was 23. However, in consultation with the Illinois Birth to Three Institute, it was decided to lower the **annual caseload per home visitor to 18 children per year** to more accurately reflect the above scheduling restrictions imposed by the evidence-based home visiting models.

#### *Service reach and funding environment*

Funder	FY15	FY16	FY17
Total Personnel (including fringe)	82%	77%	72%
Indirect	7%	7%	8%
Occupancy (do not scale)	2%	5%	4%
Supplies	2%	4%	3%
Travel	3%	1%	Included in other
Other (includes training)	1%	1%	6%
Equipment	1%	1%	1%
Contractual	2%	4%	6%

#### *Saturation or Ideal Service Reach*

The calculations described below are in the “Saturation Calculations” spreadsheet

<sup>8</sup> <https://homvee.acf.hhs.gov/Implementation/3/Healthy-Families-America--HFA-/10/2/>

<sup>9</sup> <https://www.nhvr.org/wp-content/uploads/NHVR Yearbook 2018 FINAL.pdf>

<sup>10</sup> <https://homvee.acf.hhs.gov/Implementation/3/Nurse-Family-Partnership--NFP-/14/2/#ModelImplementation-StaffingRequirements>

<sup>11</sup> <https://www.nhvr.org/wp-content/uploads/NHVR Yearbook 2018 FINAL.pdf>

As noted by the Washington Department of Children, Youth, and Families in a 2019 report to the state legislature on potential home visiting expansion scenarios, estimating an ideal saturation level for statewide home visiting services is difficult, as very little exists by way of programmatic precedent or grounding research into the level of program reach needed to obtain community-wide positive outcomes.<sup>12</sup> However, in grounding its own estimations of an ideal scale for statewide home visiting, the WA DCYF report does cite a 2007 report which examined the impacts of the scale up of the Healthy Families home visiting program in Hampton, Virginia between 1998 and 2005. While operations at full-scale (reaching beyond 50 percent of eligible families) were not sustained due to the economic downturn, the evaluation of the scale-up suggest that serving 20 percent to 50 percent of eligible families may “achieve a tipping point of positive impact that would shift their community’s profile over time.”<sup>13</sup>

At the time of the expansion report’s publication, Washington had the capacity to serve 6 percent of all births to low-income families, equivalent to 7,323 children. While noting that it is an ambitious goal, the WA DCYF expansion scenario proposes to expand home visiting services to reach 22 percent of all low-income children, which translates to 27,857 total home visiting slots, or a 280.4% increase. The addition of 20,500 new home visiting slots was estimated to require \$167 million annually in new funding, totaling \$179.4 million per year in sustaining funding for existing and expansion slots.

The Washington expansion report details a proposed tripartite phased expansion designed to expand capacity to serve the most vulnerable families more quickly, allowing time to build out capacity in more moderate and low risk populations and locales. Specific goals were set for the service coverage levels in high, medium, and low risk communities, including reaching 35% of all births to low-income families in the highest-risk, non-tribal communities. Community level risk-ratings were determined based on a risk index created by the WA DCYF, consisting of the weighted average of multiple risk indicators (maternal and child health, socioeconomic status, education, home environment, and drug and alcohol abuse) from the state’s 2017 home visiting needs assessment data. This phased expansion, prioritizing the expansion of home visiting services to high-risk populations, is similar to the methodology adopted in a 2018 report by Connecting the Dots, a partnership of the Children’s Data Network and First Five L.A.<sup>14</sup>

While creating a weighted index of risk or predictive risk-model based on linked birth and child welfare data is beyond the scope of this cost model, the Illinois Birth to Three Institute has developed a practice-driven model for estimating the slot-gap for home visiting services, which uses 200% of the Federal Poverty Level (FPL) as a proxy for family-risk and home visiting eligibility. Following IBTI recommendations, the following formula was used to calculate the number of families eligible for home visiting likely to engage in a program. First, the estimated number of births to low-income families in each county was calculated by multiplying the total number of births (2017) in each county<sup>15</sup> by the share of children under age 6 living below 200% of the Federal Poverty Level (FPL).<sup>16</sup> Rounding to the nearest thousandth, there were 149,000 total births in 2017, and 61,000 births below 200% FPL. Per IBTI

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<sup>12</sup> *Opportunities and Considerations for Expanding Home Visiting Services in Washington State* - 2019, Washington State Department of Children, Youth, and Families, 8 Mar. 2019.

[www.dcyf.wa.gov/sites/default/files/pdf/reports/HVReport2019.pdf](http://www.dcyf.wa.gov/sites/default/files/pdf/reports/HVReport2019.pdf).

<sup>13</sup> *Report on Healthy Families Virginia* <https://hampton.gov/DocumentCenter/View/188/2007-General-Assembly-Appropriations-Act?bidId=>

<sup>14</sup> <https://www.datanetwork.org/research/helping-los-angeles-county-chart-a-course-toward-universal-and-targeted-home-visiting/>

<sup>15</sup> From 2017 IDPH data, <http://www.dph.illinois.gov/data-statistics/vital-statistics/birth-statistics>

<sup>16</sup> From 2017 5-Year Estimates from the American Community Survey, Table B17024, Age By Ratio Of Income To Poverty Level In The Past 12 Months

guidance, a small number of home visiting participants enroll after the first few months of a child's life; to capture children outside of the initial birth cohort (1-3 years old), 61,000 was multiplied by 1.5 to produce the total universe of eligible children, at 91,500. However, as cautioned by the Illinois Birth to Three Institute, and reflected by the survey respondents in the sample, many families who are eligible to participate in home visiting services chose not to. As noted by home visiting providers and experts in a listening session hosted during the July 2019 Home Visiting Task Force meeting, some of the reasons that parents decline home visiting services include the following:

- A lack of time, including a lack of parental leave and inflexible work schedules
- Parents' predominating concerns over meeting basic needs (housing, nutrition, work, transportation, etc.) such that home visiting is not a priority
- Fear of being judged by a stranger (the home visitor), concerns about allowing an unknown person into the home
- Fear among immigrant and mixed-status families about the risk of engaging with home visiting services amidst rhetoric around immigration and public charge concerns.

IBTI best-practice therefore suggests that for every 2.5 to 3 home visiting slots maintained by a program, only one child will actually enroll. While planning efforts underway through the Prenatal to Three Initiative (PN3) and other state systems building tables are working to increase the uptake of home visiting services among eligible families, IBTI still estimates that only 35% of all eligible families can be reasonably expected to enroll in a home visiting program. Correspondingly, that the statewide home visiting system would need to accommodate 32,000 families eligible for and likely to enroll in services. This comports with a more simple calculation of the home visiting saturation rate; 50% of all births to families below 200% of FPL. Using the same rounded 2017 birth figures utilized above, this would translate to 30,500 families.

**The state would require the capacity to serve 32,000 children at one time to accommodate the total number of children birth to three eligible for and likely to engage in core intensive home visiting services.**

This model does not account for variations in uptake for non-first time parents; while Nurse Family Partnership (NFP) only serves low-income, first-time mothers, other evidence-based models will serve non-first time parents. A more advanced model could assess the share of births in a given cohort to non-first time parents and adjust based on the observed rates of participation in existing home visiting programs for these families.

#### *Per child per year cost of core intensive home visiting services*

As noted above, the per child cost of providing direct home visiting services, per the WA DCYF report, was estimated at \$6,547. However, this figure excludes the costs of administrative supports and performance-based contracting that were identified by WA DCYF as requisites for the expansion of home visiting services statewide. The full cost used for the expansion projection by WA DCYF is \$8,727 per slot. The full cost of an expanded statewide home visiting system in Illinois, inclusive of below-listed state funded infrastructure supports, is therefore estimated at a 33.33% increase beyond the direct-service cost of home visiting. This add-on is inclusive of the following cost components that were identified as requisite infrastructure/external components of a statewide home visiting system:

- Public awareness
- Data systems

- Community building
- Professional Development/Training
- Evaluation
- Continuous Quality Improvement

At a program size of 5 FTE home visitors, the per child cost of core intensive home visiting services, excluding infrastructure supports, is \$5,702 for a Downstate program, and \$7,156 for a program in Cook and the Collar Counties. However, with the infrastructure add-on, the per-child cost is closer to the true estimation of the funding needed to sustain services within a functional statewide home visiting system.

**At a program size of 5 FTE home visitors, the per child cost of core intensive home visiting services, including infrastructure supports, is \$7,550 for a Downstate program, and \$9,488 for a program in Cook and the Collar Counties.**

#### *Cost savings associated with economies of scale*

The Washington model predicts a 9.3% decrease in per slot costs as the system grows from serving 6 to 22 percent of all births to low-income families. This cost-savings stems from an estimated reduction in administrative costs won through economies of scale, as the state funds a smaller number of LIAs that reach a larger number of families in rural areas. These administrative costs, which include technical assistance, data/evaluation, administration and oversight, workforce, and governance services, are not included in the core intensive home visiting services cost categories or per slot costs, and so it is not reasonable to project the same cost savings even as economies of scale could develop in Illinois.

#### *Home Visiting Cost*

The share of home visiting slots needed varies by community, based on the number of births to low-income families in each county. Because of the substantial variations in personnel costs across the Downstate and Cook and Collar Counties regions, the distribution of home visiting services across the state plays a significant role in determining the system-wide costs of providing services. Based on the number of low-income births in each region, 41% of all home visiting slots would be allocated to communities in the Downstate area, and 59% would be within the Chicago Metro area (Cook, DeKalb, DuPage, DuPage, Grundy, Kane, Kendall, McHenry, and Will counties).

Based on the number of low-income births in each region, 41% of all home visiting services would be allocated to communities in the Downstate area, and 59% would be within the Chicago Metro area (Cook, DeKalb, DuPage, DuPage, Grundy, Kane, Kendall, McHenry, and Will counties). **This would bring the total cost of core intensive home visiting services statewide to \$278,189,440, annually.**

## VI. Cost Components of Doula

**The figures and calculations described in this section can be found in sheet 2 of the accompanying spreadsheet.**

Doulas visit families prenatally, attend births, support breastfeeding, coordinate group meetings, and help families adjust in the first few weeks of a newborn's life. Doulas can help to initiate early attachment between parents and babies, which can then continue as a family transitions into core home visiting services. Doula services are intended to be embedded into a traditional home visiting program; per IBTI guidance on the Parents Too Soon Doula Best Practice Standards, a program should aim to

maintain at least 3 FTE home visitors for every 1 FTE doula to ensure sufficient capacity to transition doula families to core intensive home visiting services.

#### Personnel

Observed Doula Salaries, Exclusive of Fringe	Downstate	Cook and Collar Counties
Doula	\$ 30,822	\$ 37,832
Doula Supervisor	\$ 43,960	\$ 45,548
Doula Program Director (do not scale)	\$ 67,117	\$ 69,571
Doula Support Position	\$ 30,698	\$ 30,945

Educational attainment of Doulas* in OunceNet** as of 8/19/19	Percent of Workforce
HS Degree or Less	12%
Some college	39%
BA	38%
BA+	12%

\*Active Doulas only

\*\* Total (N) of 77

Much like the home visiting workforce, compensation of the doula workforce substandard, given the educational attainment and work experience common to professionals in the field. Given the adjustments made to home visiting salaries, corresponding increases were allocated to the recommended regional average salaries for each doula position. Doula, doula supervisor, and doula program director salaries were tied to the recommended comparable home visitor salaries, based on the assumption that these roles demand similar levels of educational attainment and experience. The administrative position (data collection/entry) salary was set at the recommended salary for an administrative assistant. To produce an estimate of the desired salaries for the doula support position, the average increase from the existing to the desired salaries of the other doula positions was calculated for the Downstate (18% increase) and Cook and Collar Counties (26% increase) regions. This percent increase was then added to the existing base salary.

Site Personnel in Early Childhood Salary Scale	Downstate Recommended Salary	Cook and Collar Counties Recommended Salary	Notes on salary adjustments
Doula	\$ 41,650	\$ 52,000	Home visitor recommended salary
Doula Supervisor	\$ 53,398	\$ 66,220	Home visitor supervisor recommended salary
Doula Program Director (do not scale)	\$ 63,750	\$ 75,000	Home visitor director recommended salary
Doula Support Position	\$ 36,079	\$ 38,944	Downstate: base salary X 1.18

			Cook and Collar Counties: base salary X 1.26
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### *Service levels/caseloads*

Staffing ratios were determined based on a combination of budget/survey data, and adjustments by the Illinois Birth to Three Institute based on best-practices.<sup>17</sup> The average home visiting program across the Downstate and Cook and Collar County samples had 4 FTE doulas. In the cost model spreadsheets, staffing ratios are scaled up based on the number of FTE home visitors. Staffing ratios were not regionalized, in an attempt to cost out best practice staffing which should not differ dramatically by program location. **The annual doula caseload was set at 23 births per doula**, based on estimates from the Illinois Birth to Three Institute and guidance from the ISBE FY20 RFP guidance on embedded doula services.<sup>18</sup>

Doula staffing ratios (based on 4 Doula FTE)	% FTE
Doula	4.0
Doula Supervisor	0.8
Doula Program Director (do not scale)	0.1
Doula Support Position	0.4

### *Fringe*

The standard fringe rates applied to the estimates of core intensive home visiting services were also applied to the regionalized estimates of doula personnel costs.

Average Fringe as percent of	Downstate	Cook and Collar Counties
Total Personnel Costs	27.7%	23.0%

\*Not weighted to account for regional share of services

### *Non-personnel costs*

Just as with the home visiting non-personnel costs, the share of each program's budget dedicated to various cost components was determined for doula services. From this data, the percent breakdown of program budgets was calculated. Because of the doula program sample was smaller, the decision was made not to calculate a regional breakdown of the share of non-personnel costs.

Cost Categories	Percentage
Total Personnel (including fringe)	76%
Indirect	7%

<sup>17</sup> Illinois Birth to Three Institute, Best Practice Standards PTS-Doula

<sup>18</sup> <https://www.isbe.net/Documents/FY20-PI-RFP-NOFO.pdf>

Cost Categories	Percentage
Supplies	4%
Travel	3%
Other (includes training and contractual services)	7%
Equipment	3%

Dollar figures for non-personnel costs were computed by adjusting the total personnel costs of programs, across each level of scale, relative to the percent associated with each non-personnel cost component. As in the personnel section, certain cost components like occupancy were set at the average amount for a program with 4 FTE home visitors and were not scaled up. Formulas in the cost model spreadsheets were imputed to allow the total cost category values to change as edits are made to either the salary figures or the cost category ratios.

#### *Saturation or Ideal Service Reach*

Because doula services only serve families from the prenatal period through shortly after birth, estimations of saturation need to be based on the number of births, rather than number of children in aged birth to three. Once again turning to the simple estimation of 50% of all births under 200% FPL, an estimated 30,500 doula slots would be needed to reach eligible families likely to enroll in services.

**The state would require the capacity to serve 30,500 mothers/families at one time to accommodate the total number of births eligible for and likely to engage in doula services.**

#### *Per child per year cost of doula services*

**At a program size of 4 FTE doulas, the per child cost of doula services is \$4,182 for a Downstate program, and \$4,472 for a program in Cook and the Collar Counties.**

#### *Doula Total Cost*

Based on the number of low-income births in each region, 41% of all doula services would be allocated to communities in the Downstate area, and 59% would be within the Chicago Metro area (Cook, DeKalb, DuPage, DuPage, Grundy, Kane, Kendall, McHenry, and Will counties). **This would bring the total cost of doula services statewide to \$141,774,800, annually.**

## VII. Cost Components of Family Connects

The figures and calculations described in this section can be found in sheet 3 of the accompanying spreadsheet.

Based on the principle that all families, regardless of socioeconomic status or income, can benefit from support when welcoming a new baby, Family Connects is an evidence-based model for supporting newborns and their families. The model is based on the highly-successful Durham Connects program, and provides between one and three nurse home visits to every family with a newborn beginning at about three weeks of age. Nurse home visitors use a tested screening tool to assess newborn and maternal health, and can make referrals to appropriate community resources based on a family's strengths, needs, and desires. FC IL does not duplicate home visiting or doula services, and instead adds to the continuum of care for new parents and their infants.

With funding by the MIECHV program and the Illinois State Board of Education, and with implementation support from the Ounce of Prevention Fund, Family Connects Illinois (FC IL) was introduced in 2017 as a pilot in Peoria and Stephenson Counties. While the roll-out of these two programs has been successful, because these sites are still growing the decision was made, though consultation with the Illinois Birth to Three Institute, to base the FC IL cost estimates on the sample budget provided by Family Connects International (FCI).

#### *Staffing calculations for Family Connects Illinois (FC IL)*

**The staffing formula described in this section can be found in sheet 4 of the accompanying spreadsheet.**

FC IL is a universal newborn support program, meaning that services are offered to every family delivering at an implementing hospital or community. Correspondingly, while home visiting and doula service saturation levels are based on tiered estimations of need, FC IL costs are calculated on a per birth basis. **The personnel and material cost components listed below are based on 1,500 births, as broken out in the Family Connects International sample budget.**

Family Connects International guidance suggests that programs should aim to give Nurse Home Visitors (NHV) between 6-8 new cases per week, based on the share of eligible families that actually receive a visit. Though universal newborn support programs like FC IL are offered to every family delivering in a community, some may decline a nurse visit for a host of reasons. FC IL experts from IBTI suggested that 70% of all eligible families receiving a visit would be a strong, yet attainable reach for a universal newborn support program. Using Family Connects International staffing formulas of a sample site with 1,500 births per year, with 70% of all eligible births receiving a visit, at 46 working-weeks per NHV per year 3 NHVs would receive 7.61 new cases per week, or a total of 350 per year. However, FC IL experts from the IBTI cautioned that this annual caseload was too high, given the implementation experience in Peoria and Stephenson Counties. To bring the annual number of new cases or births per NHV closer in-line with the Illinois context, this FC IL cost model is based off of 3.75 NHV for an annual caseload of 280 new cases, or 6.09 new cases per nurse per week.

#### *Personnel components of FC IL*

The Family Connects International (FCI) sample budget assumes a three-year roll-out to full service levels. The following salaries are based on year 3 salaries, which are scaled up by a 5% cost of living adjustment (COLA) from starting salaries. A statewide fringe estimate was, based on FCI guidance, at 40% of personnel costs.



Personnel positions (exclusive of fringe) for 1,500 births per year	Recommended Year 3 salaries	Staffing ratios (% FTE)	Total Personnel Costs
Executive Leadership	\$ 137,813	0.2	\$ 27,563
Nurse Management/Clinical Nursing Director	\$ 88,200	1.0	\$ 88,200
Nurse Home Visitors*	\$ 63,945	3.75	\$ 239,794
Nurse Leads	\$ 71,001	1.0	\$ 71,001
Program Support	\$ 46,305	2.0	\$ 92,610
Community Alignment Director	\$ 71,663	0.5	\$ 35,831
Critical Data Manager	\$ 60,638	0.2	\$ 12,128
TOTAL	-	-	\$ 567,126
<b>TOTAL (including fringe @ 40%)</b>	-	-	<b>\$ 710,892</b>

### *Fringe*

Rather than using the regionalized average fringe rates derived from the program sample, the decision was made to use the 40% fringe rate suggested by the Family Connects International sample budget. This figure more accurately represents fringe rates in the context of local health departments and hospitals nationwide where Family Connects has already been implemented, in contrast to home visiting agencies. However, fringe rates would likely match those utilized agency-wide by implementing entities in Illinois, and could be lower.

Fringe as percent of Total Personnel Costs	Family Connects International Recommended Rate
	40%

While individual program budget lines for core intensive home visiting and doula services were aggregated into comparable cost components to account for variations in data gleaned across programs, the Family Connects International sample budget details specific cost breakouts per FTE staff, births, and implementing sites. The following costs reflect the sample budget of a program serving 1,500 eligible births. The only cost category from the sample budget that was not included was travel to Durham for training, at \$650 per staff per trip for 12 staff. This is because the Director of Dissemination and Program Certification, Family Connects International, recommended that FC IL staff in Illinois instead participate in Chicago-based training, which will be made feasible by extensive FCI guidance provided to the City of Chicago in their expansion of FC IL.

Non-personnel costs per 1,500 births per year	Total
Books and Subscriptions (e.g., Continuing Education)	\$ 10,000
Computers	\$ 6,000

Non-personnel costs per 1,500 births per year	Total
Food (for community meetings, etc.)	\$ 12,000
Training Supplies	\$ 4,800
Office Supplies	\$ 36,000
Marketing Materials	\$ 40,000
Medical Supplies	\$ 39,500
Developmental Resource Materials for Parents	\$ 36,000
Family Connects Training / Consulting Fees	\$ 4,800
Family Connects Database Access & Support	\$ 3,840
Liability Insurance	\$ 4,800
Local Mileage	\$ 19,800
Utilities	\$ 15,000
Postage	\$ 4,800
Rent	\$ 40,000

#### *Saturation or Ideal Service Reach*

As a universal newborn support program, every family delivering in Illinois would be eligible for services, regardless of income or risk factor. Family Connects is non-duplicative of core intensive home visiting and doula services, and serves to connect eligible families to these resources if they are not already enrolled. Therefore, the ideal saturation

**The state would require the capacity to serve 30,500 mothers/families at one time to accommodate the total number of births eligible for and likely to engage in doula services.**

#### *Cost per birth*

Because FC IL is a universal program, costs should be calculated based on the total number of births eligible for the service at a given site, rather than the cost per birth receiving a visit by a nurse home visitor. **The cost per birth is \$714.**

#### *FC IL Total Cost*

**Based on 149,389 births statewide, FC IL would cost \$106,663,746, annually, when rolled out at full-scale to provide access to every community.**

## VIII. Cost Components of Coordinated Intake for Home Visiting

**The figures and calculations described in this section can be found in sheet 5 of the accompanying spreadsheet.**

Coordinated Intake (CI for HV) is systems-support necessary to ensure that families are connected to home visiting and other services in their communities. Coordinated Intake is not a single-point-of-entry for the entire early childhood system, nor is it a component of Family Connects. Trained CI for HV staff, often housed out of community-based human service agencies or public health departments, monitor the capacity of the home visiting programs in their area, and support family recruitment and enrollment into appropriate home visiting services.

Currently, CI for HV exists in 12 communities through MIECHV funding and in 5 additional communities through other sources; these sites are situated in a range of locations, varying in population density, demographics, as well as available home visiting and community referral resources. Under the Home Visiting Task Force, a Coordinated Intake for Home Visiting Work Group is convening to support the strategic planning deliverables of the PDG B-5 grant and to offer recommendations on the statewide scale of CI for HV programs. This group will aim to complete its recommendations by the end of October 2019.

### *CI for HV personnel costs and infrastructure/support costs*

A statewide mean salary for Coordinated Intake workers was obtained from early analysis of the forthcoming 2019 MIECHV CQI survey, conducted by the Center for Prevention Research and Development at the University of Illinois, Champaign.

CI for HV Salary, Exclusive of Fringe	Statewide Mean
CI Worker	\$ 33,000

However, as confirmed by the CI for HV MIECHV Family Recruitment Specialist, this mean salary is too low to reflect the educational attainment and job responsibilities of a CI worker. Instead, salaries for CI workers in the Downstate and Cook and Collar Counties regions should mirror those of home visitors. The desired regionalized salaries for CI workers were therefore tied to the desired home visitor salaries. Similarly, the salary for a CI for HV supervisor should match the desired salary set for home visiting supervisors in each region.

Additionally, current Coordinated Intake workers are often overburdened, taking on the job responsibilities of a referral pathways specialists as well as a Community Systems Development worker (CSD). As noted by a forthcoming policy brief on recommendations for the CI system, the ideal CI site should be staffed by two different workers with discrete job objectives. One CI worker should be tasked with managing the referral pathways and intake for families, and another CI worker would be tasked with cultivating community partnerships necessary to make successful referrals to home visiting. These 2 FTE workers should be managed by a CI for HV supervisor, at 0.5 FTE. The staffing patterns and desired salaries for CI for HV staff, per site, are as follows:

CI for HV Staffing Roles and Salaries	Staffing Ratios (% FTE)	Downstate	Cook and Collar Counties
CI Worker #1	1.0	\$ 41,650	\$ 52,000
CI Worker #2 (CSD)	1.0	\$ 41,650	\$ 52,000
CI for HV Supervisor	0.5	\$ 53,398	\$ 66,220
TOTAL (including fringe)		\$140,468	\$168,645

*Fringe for CI for HV sites*

The standard fringe rates applied to core intensive home visiting services were also applied to the regionalized estimates of CI for HV personnel costs.

Average Fringe as percent of Total Personnel Costs	Downstate	Cook and Collar Counties
	27.7%	23.0%

\*Not weighted to account for regional share of services

Occupancy was calculated at the average observed costs in the budgets of 3 standalone CI for HV sites, provided by MIECHV. Additional costs were obtained through a sample of the FY20 budgets of 10 Coordinated Intake sites by the MIECHV Coordinated Intake Strategy Manager.

Non-personnel costs for CI for HV	Statewide Mean
Travel (in state)	\$5,300
Training and education	\$5,024
Occupancy	\$5,588
Equipment	\$6,000
Telecommunications	\$3,600
Printing	\$595
TOTAL non-personnel per site	\$ 26,107

*Per site per year cost of CI for HV*

**The per site cost of CI for HV services is \$164,444 for a Downstate program, and \$192,621 for a program in Cook and the Collar Counties.**

### *CI for HV Proposed Statewide Saturation*

In the absence of a concrete recommendation from the CI for HV Work Group, this analysis tentatively modeled CI for HV costs based the number of CI sites needed to sustain home visiting at-scale on the number of Child and Family Connection agencies. Similar to Coordinated Intake, CFC regional intake agencies assist children and families in entering the Early Intervention system, supporting the initial intake process in additions to making referrals for evaluations/assessments and/or other direct services. They are distributed around the state and have a unique catchment area; 25 CFCs cover distinct county-groupings around the state, with 7 in the Cook County region allocated by zip code to match population density.

While CI for HV would not necessarily need to be nested within the same agency as a local CFC, the statewide distribution of early intervention credentialed Service Coordinators could be mirrored by an equal number of CI for HV workers. Given that the staffing costs vary somewhat significantly by region, it is important to note that the distribution of CI for HV sites across the state can alter the system-wide costs of providing this structural support. **Basing the geographic distribution of sites on the distribution used for CFCs, the total cost of sustaining 18 CI for HV sites in the Downstate region, and 7 in Cook County, would be \$ 4,877,135.** These estimates should be read with certain reservations. In any expansion scenario, it would be necessary to determine that the systems-support positions would not duplicate any of the infrastructure supports covered by the 33.3% add-on to the per child per year cost of core intensive home visiting services. Additionally, because there are currently a number of communities in the Downstate region without a single home visiting program, this CI for HV scenario would only be feasible following the robust expansion of home visiting services, or access to a home visiting program, in every community.

### *CI for HV Statewide Infrastructure Personnel Costs*

The MIECHV team at the Governor's Office of Early Childhood Development estimated that the four current systems-support positions cost an average of \$90,000 annually, inclusive of benefits and supervisory support. These staffing patterns and costs associated with each position include the following:

CI for HV Systems Support Positions	Annual Cost	Staffing Ratios (% FTE) Desired at HV scale
Program Manager	\$ 90,000	1.0
Technical Assistance/Coach for CI sites	\$ 90,000	2.0
Continuous Quality Improvement Supports	\$ 90,000	1.6
Data Systems Specialist	\$ 90,000	0.50
TOTAL (statewide, including fringe @ 25%)		\$ 459,000

### *Non-personnel costs of CI for HV systems supports*

CI for HV Systems Support Non-Personnel	Annual Cost	Notes
Travel (in state)	\$ 4,800	\$ 400 per month
Conferences	\$ 3,000	2 staff attend a 3-day conference
Training and education	\$ 5,000	
Occupancy	\$ 11,176	
Equipment	\$ 12,000	\$ 3,000 per new staff
Telecommunications	\$ 10,800	\$ 150 per month per staff
Supplies	\$ 1,200	
Learning communities (meeting space, supplies)	\$ 8,000	Currently, MIECHV CI communities participate in quarterly learning collaborative meetings in Bloomington, which costs roughly \$1,000 per meeting for food and meeting space usage. Under the desired CI for HV system, a Downstate cohort and Cook and Collar County would convene quarterly, for a total of eight meetings annually.
<b>TOTAL non-personnel</b>	<b>\$55,976</b>	

GOECD has estimated that building out a statewide data system for Coordinated Intake for Home Visiting, which would be accessible to all home visiting programs, will require \$50,000 - \$75,000 as a one-time cost. Additional data maintenance, including program access and training on data management, could feasible be absorbed into the larger early childhood system-wide administrative and infrastructure supports costs.

#### *CI for HV Total Cost*

**The full cost of CI for HV is \$4,589,722 when rolled out at full-scale to provide access to every community.**

## VIV. Conclusion

Inclusive of core intensive home visiting services, doula services, Family Connects, and Coordinated Intake, at the service levels described in the sections above, the full cost of the Illinois Home Visiting System is estimated at \$531,217,701 annually.

Though highly-vetted with the Illinois Birth to Three Institute, the Governor's Office of Early Childhood Development, and the Illinois Policy team, further discussion with the home visiting provider and advocate community may reveal necessary changes to the underlying assumptions in this cost model. Changes to these key assumptions, including to the ideal compensation of home visiting and doula providers as well as the saturation of services across the continuum of home visiting services, will have considerable implications for the total projected cost of the Illinois Home Visiting System. Additionally, planning efforts underway through PDG B-5 as well as the Prenatal to Three Initiative may inform the speed at which home visiting services are expanded statewide.

Questions regarding this cost model can be directed to Kayla Goldfarb, Policy Analyst, Illinois Policy Team, Ounce of Prevention, at [kgoldfarb@theounce.org](mailto:kgoldfarb@theounce.org).