

GEORGIA HEALTH POLICY CENTER



A Report on the Impact of Lactation Consultant Services and Breastfeeding

Presented to:

Healthy Mothers, Healthy Babies Coalition of Georgia



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Appendix A: Medicaid Mothers’ Responses to Breastfeeding Questions

This report was prepared for *Healthy Mothers, Healthy Babies Coalition of Georgia* by representatives of the Georgia Health Policy Center at Georgia State University:

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Background

International Board Certified Lactation Consultants (IBCLCs) are health care professionals (HCPs) who specialize in helping new mothers in the management of breastfeeding (BF). Certification of these HCPs is administered by the International Board of Lactation Consultant Examiners®, Inc. (under the direction of the US National Commission for Certifying Agencies). Evidence indicates that, on discharge, rates of exclusive BF and any BF are higher among women who have delivered their babies in hospitals with IBCLCs on staff than in those without these professionals.^{1,2}

Due to having specific clinical expertise and training in the clinical management of complex problems with lactation, the 2011 *Surgeon General's Call to Action to Support Breastfeeding*³ suggests that IBCLCs become “covered providers” for insurance coverage purposes. Specifically, the report states:

Provide reimbursement for IBCLCs independent of their having other professional certification or licensure. The taxonomy for health care clinicians defines qualifications of clinicians to be reimbursed. One option for reimbursement would be to place certified lactation consultants within the category of “nursing service related providers,” and specifying the nature of care they provide would allow for reimbursement of IBCLCs without requiring that they are also registered nurses. Alternatively, developing state licensure of lactation consultants could help to achieve the same purpose. (p. 48)

Healthy Mothers, Healthy Babies Coalition of Georgia (HMHB) introduced House Bill (HB) 363 in 2013. HB 363’s main purpose was to establish a licensure process for lactation consultants in Georgia. The Georgia Occupational Regulation Review Council reviewed the information from HMHB as well as its own information and chose not to recommend passage of House Bill 363 (LC 33 5015) mainly due to the cost associated with the licensure process and associated reimbursement via Medicaid.

Federal Recommendations and Guidelines

A number of Healthy People 2020⁴ recommendations for Maternal, Infant, and Child Health (MICH) focus on BF. MICH-21 is to “Increase the proportion of infants who are breastfed.” Specific BF recommendations and targets are presented below:

1. MICH-21.1 Increase (↑) the proportion of infants who are ever BF: baseline 74% / target 81.9%
2. MICH-21.2 ↑ the proportion of infants who are BF at 6 months: baseline 43.5% / target 60.6%

¹ Castrucci BC, Hoover KL, Lim S, Maus KC. A comparison of breastfeeding rates in an urban birth cohort among women delivering infants at hospitals that employ and do not employ lactation consultants. *J Public Health Manag Pract* 2006;12:578–585.

² Bonuck KA, Trombley M, Freeman K, McKee D. Randomized controlled trial of a prenatal and postnatal lactation consultant intervention on duration and intensity of breastfeeding up to 12 months. *Pediatrics* 2005;116:1413–1426.

³ U.S. Department of Health and Human Services. *The Surgeon General's Call to Action to Support Breastfeeding*. Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General; 2011.

⁴ U.S. Department of Health and Human Services. *Healthy People 2020. Maternal, Infant and Child Health Objectives*. Accessed September 11, 2014 at: <http://www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health/objectives>.

3. MICH-21.3 ↑ the proportion of infants who are BF at 1 year: baseline 22.7% / target 34.1%
4. MICH-21.4 ↑ the proportion of infants who are BF exclusively thru 3 months: baseline 33.6% / target 46.2%
5. MICH-21.5 ↑ the proportion of infants who are BF exclusively thru 6 months: baseline 14.1% / target 25.5%

The American Academy of Pediatrics (AAP) recommends exclusive BF for the first 6 months of life. AAP further recommends BF continue up to 1 year as complementary foods are introduced into an infant's diet.⁵

Purpose

The purpose for this report is to identify the impacts -- on families, insurers, and the state of Georgia (GA) -- that result from breastfeeding. Specifically, HMHB requested an analysis of the cost savings associated with having licensed IBCLCs providing support services and breastfeeding consultant services in clinical settings in GA.

This analysis focused on the evidence regarding the role of IBCLCs in breastfeeding cost savings or increased expenditures. To the extent possible, the cost impact analysis in GA includes the percentage of Medicaid mothers in GA who initiate breastfeeding, an estimate of the percentage of mothers who would use IBCLC services if available, the costs associated with IBCLC services/visits, and costs associated with diminished risk of specific conditions or enhanced health due to breastfeeding vs. formula feeding.

Data Summary

Breastfeeding

Between 2006 and 2013, BF rates have continued to rise in the United States. While initiation was almost 80% in 2011, the BF duration recommendations are not being achieved by the majority of women.⁶ The Centers for Disease Control and Prevention (CDC) reports (p. 2): "Of infants born in 2011, 49% were BF at 6 months and 27% at 12 months."⁸ As noted above, the targets for these behaviors are 60.6% and 34.1% respectively.

The GA Supplemental Nutrition Program for Women, Infants and Children (WIC) provides BF peer counselor support for low income mothers in all 18 health districts. GA WIC reports⁷ the percent of low income mothers who initiate BF and infants who are breastfed at least 6 months has remained relatively stable over time, but still below national benchmarks. Table 1 summarizes GA WIC BF data from 2011 to 2014.

⁵ American Academy of Pediatrics Section of Breastfeeding. Policy statement: breastfeeding and the use of human milk. *Pediatrics*. 212;129:e827-41.

⁶ Centers for Disease Control and Prevention. Breastfeeding report card United States 2014. Retrieved October 2, 2014 from <http://www.cdc.gov/breastfeeding/pdf/2014breastfeedingreportcard.pdf>.

⁷ Stormant T, Georgia Department of Public Health Supplemental Nutrition Program for Women, Infants and Children. Georgia WIC Breastfeeding Gold Standard. Presented to Healthy Mothers, Healthy Babies Coalition of Georgia. October 7, 2014.

Year	% initiate BF	% infants BF 6 months
2011	55.18	35.20
2012	57.19	34.48
2013	57.80	35.58
2014 (as of Oct 2014)	57.21	35.55

Breastfeeding data reported on the U.S. Standard Certificate of Live Birth⁸ from 2009 to 2012 was obtained from the Georgia Department of Public Health (GDPH).⁹ This information is reviewed in detail in **Key Question #1** later in this document.

There is good news. From 2009 to 2012, the percent of mothers in Georgia answering “yes” to the question on the birth certificate “Is the infant being breastfed at discharge?” is increasing across all payment methods (e.g. insurance types). Importantly, 15% more of Medicaid mothers were BF at discharge in 2012 vs. in 2009.⁹ This information is summarized in Table 2.

Table 2. Percent of “Yes” Responses to BF at Discharge by Insurance Type by Year⁹

Payment Type	Year				Increase in % 2009 to 2012
	2009	2010	2011	2012	
Medicaid	43.19	45.91	50.42	58.37	↑ 15%
Private	71.15	71.83	75.36	82.05	↑ 11%
Self-Pay	57.19	58.71	63.84	70.87	↑ 14%
Other	58.17	63.41	67.99	70.99	↑ 13%
Unknown	24.45	22.61	32.57	44.33	↑ 20%

When comparing BF data from southern states to the United States percentages, one can see similarities and differences as presented in Table 3. The 70.3% of GA women who ever breastfed in 2011 is an increase from the 66% reported in the 2006 National Immunization Survey. With the exception of North Carolina, southern state BF rates are far below the national average. To compare, in 2011, mothers in Vermont and California reported the highest rates of exclusive BF at 3 months exceeding 56%, and more than 27% mothers in Vermont and Alaska reported exclusive BF at 6 months.⁹

⁸ Centers for Disease Control and Prevention. U.S. Standard Certificate of Live Birth. Retrieved August 21, 2014 from: <http://www.cdc.gov/nchs/data/dvs/birth11-03final-ACC.pdf>

⁹ Georgia Department of Public Health. State Office of Vital Records. Live Birth Certificate Data by Health District and County, 2009-2012.

State	Ever Breastfed	BF at 6 months	BF at 12 months	Exclusive BF at 3 months	Exclusive BF at 6 months
Alabama	67.3	32.1	11.8	26.6	13.2
Georgia	70.3	40.1	20.7	27.2	14.5
Mississippi	61.5	28.9	10	28.8	10.1
N Carolina	77.2	48.3	24.5	42.6	20.7
S Carolina	73.4	37.4	14	32	13.4
Tennessee	74.9	40.7	20.9	39.1	15.4
United States	79.2	49.4	26.7	40.7	18.8

Lactation Support

Since 2006, CDC's Breastfeeding Report Card has tracked the number of International Board Certified Lactation Consultants (IBCLCs) per 1,000 live births.⁸ In 2006, in the U.S., the number of IBCLCs was 2.1 per 1,000 live births. Nationally, this number increased to 3.5 per 1,000 live births in 2013.

Continuing to increase the number of IBCLCs in Georgia is an important goal as evidence suggests that support by an individual trained in lactation services both in and after the hospital can influence BF initiation and duration.^{11, 12} Currently, Georgia is below the national average in terms of the number of IBCLCs per 1,000 live births at 2.5; the total number of IBCLCs in Georgia is 326.

The CDC report⁸ also examines a number of indicators by state to assess BF support. A subset of the indicators is presented below including:

- Results on the Maternity Practices in Infant Nutrition and Care (mPINC) survey: This is a national survey of maternity care practices and policies.¹³ The survey is administered by CDC to all hospitals and birth centers with registered maternity beds in the US and Territories. CDC calculates scores for every facility and state to indicate their performance on the mPINC survey.

¹⁰ Centers for Disease Control and Prevention. National Immunization Survey. 2011 births.

¹¹ Castrucci BC, Hoover KL, Lim S, Maus KC. Availability of lactation counseling services influences breastfeeding among infants admitted to neonatal intensive care units. *Am J Health Promot.* 2007 May-Jun;21(5):410-5.

¹² Fu I, Fong D, Heys M, Lee I, Sham A, Tarrant M. Professional breastfeeding support for first-time mothers: a multicentre cluster randomised controlled trial. *BJOG.* 2014 Dec;121(13):1673-83.

¹³ Centers for Disease Control and Prevention. Maternity Practices in Infant Nutrition and Care. Retrieved October 15, 2014 from: <http://www.cdc.gov/breastfeeding/data/mpinc/index.htm>

- Baby-Friendly Facility Live Births: The Baby-Friendly Hospital Initiative (BFHI) is a global program launched by the World Health Organization and the United Nations Children’s Fund (UNICEF) in 1991 to encourage and recognize hospitals and birthing centers that implement best practices for infant feeding and mother/baby bonding.
- Number of Certified Lactation Counselor (CLCs) and IBCLCs per 1000 live births.
- Whether or not the state’s child care regulations support breastfeeding onsite.

Table 4. Breastfeeding Support Indicators among Southern States⁷ (p.5)

State	Average mPINC Score	% of live births occurring at Baby-Friendly Facilities	% of breastfed infants receiving formula before 2 days of age	# of CLCs per 1000 live births	# of IBCLCs per 1000 live births	State’s child care regulation supports onsite BF
Alabama	67	2.50	27.0	1.49	2.38	No
Georgia	69	0	27.1	6.69	2.50	No
Mississippi	59	0	15.1	0.57	1.81	Yes
N Carolina	75	9.75	14.3	0.96	4.91	Yes
S Carolina	78	9.25	22.6	2.76	2.73	No
Tennessee	67	0.13	14.6	4.13	2.21	No
U.S.	75	7.79	19.4	3.84	3.48	7 states

Key Questions

Key Question #1: What is the estimated percentage of Georgia Medicaid Mothers who currently initiate breastfeeding?

*Based on an examination of national and state trends in breastfeeding, particularly in the largest counties in GA, the **estimated average percentage of GA Medicaid moms who currently initiate breastfeeding is 61.17%**.*¹⁴

Georgia Data:

Information from Georgia’s Live Birth Certificate data set allows us to estimate the percentage of Georgia infants who were being breastfed at discharge by insurance type.⁹ Specifically:

- Question 38 on the Certificate asks the respondent to identify the “Principal Source of Payment for this Delivery.” Answer options include: Private Insurance, Medicaid, Self-Pay, Other (Specify). The GDPH-provided data also includes the number and percent of responses for “Unknown” payment type by year.

¹⁴ Centers for Disease Control and Prevention. PRAMS On-line Data for Epidemiologic Research. Access online August 25, 2014 at: <http://apps.nccd.cdc.gov/cPONDER/default.aspx?page=DisplayAllYears&state=6&year=0&category=3&variable=5&view=2&boc=Break%20Out%20by%20Medicaid%20recipient%20%28at%20any%20time%29&selection=0>

- Question 58 on the Certificate asks “Is the infant being breastfed at discharge?” with “Yes” or “No” as the answer options.

Among **all** payer types, the percent responding “yes” to BF at discharge has steadily risen over time: 2009 = 50.9%; 2010 = 53.7%; 2011 = 59.2%; and 2012 = 67.5%. In 2009, 43.19% of Georgia mothers on **Medicaid** (n=24,796) indicated “yes” to the BF initiation at discharge. In 2012, the percent of live births covered by **Medicaid** with a positive response was 58.37% (n=34,031); *an increase of 15.9%*.

Chart 1. Percent of “Yes” Responses on Breastfeeding at Discharge Question by Year by Insurance Type

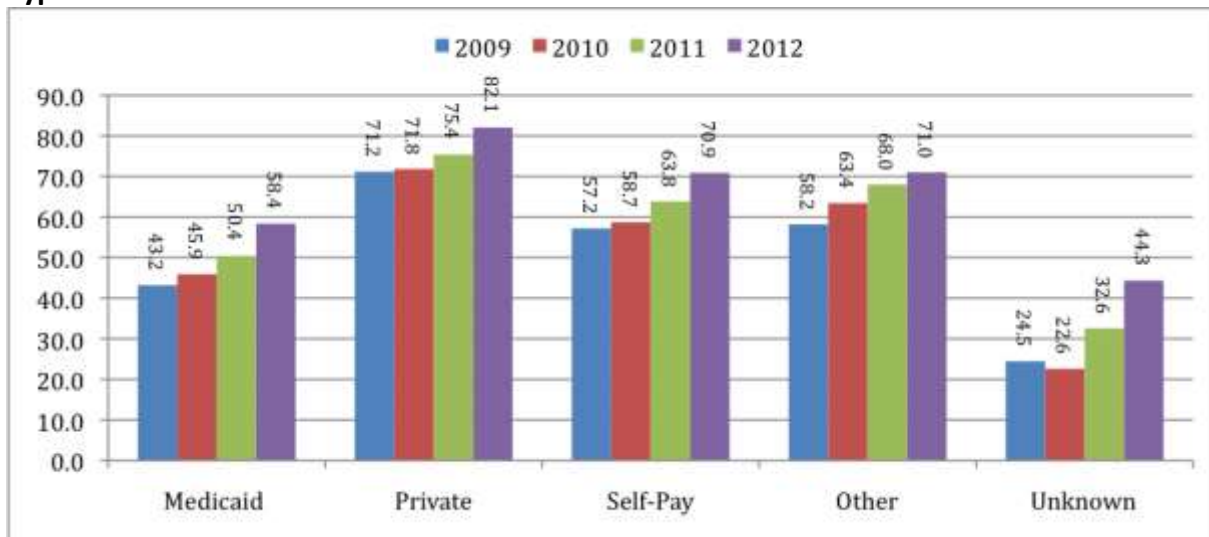
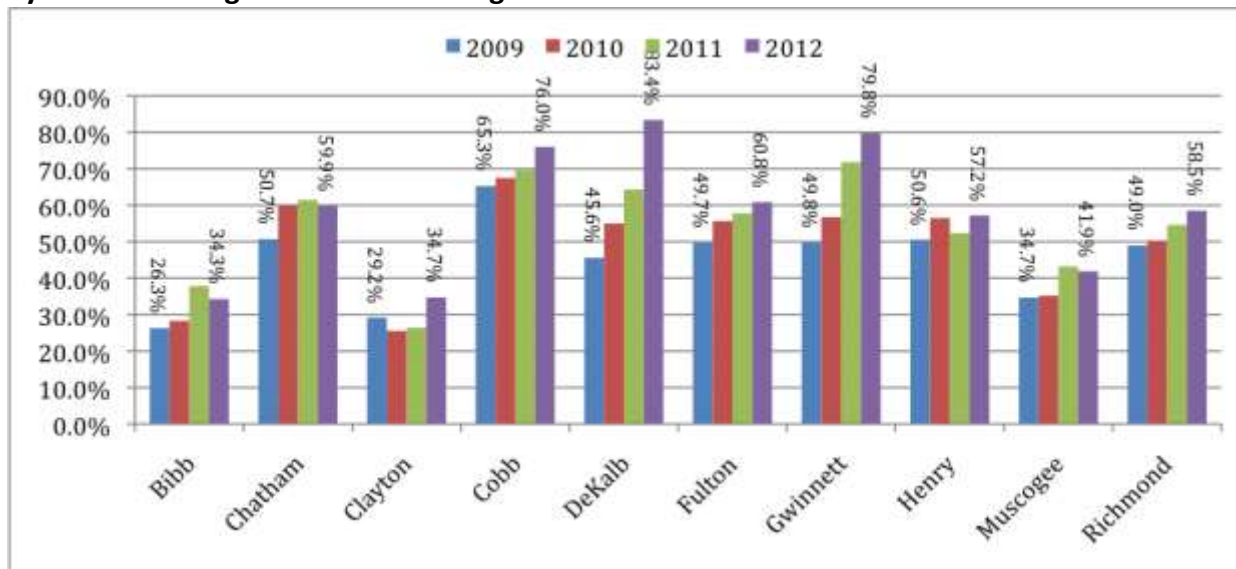


Chart 1 demonstrates that BF at discharge is increasing across all payment types. The Georgia counties with the largest number of annual births (2009 to 2012) covered by Medicaid are DeKalb, Fulton, Gwinnett, Cobb, and Clayton.

Chart 2 provides a snapshot of the percentage of infants BF at discharge covered by Medicaid for the GA counties with the highest birth volumes over a four year period. Hall County was excluded from this summary due to the fact that the data was inconsistent over time.

Chart 2. Percent of “Yes” Responses on Breastfeeding at Discharge Question for Medicaid Births by Year for Georgia Counties with Highest Number of Annual Births



In 2011, 50% of Georgia’s Medicaid mothers indicated they were still breastfeeding four weeks after delivery; that number dropped to 39.3% at 8 weeks post-delivery. More detailed tables on Medicaid mothers’ responses to BF questions are presented in **Appendix A**.

For additional details on the BF data from the Live Birth Certificate, Table 5 presents information by Health District and two types of payment (Medicaid vs. Private).

Table 5. Total Number of Births by Health District and Number / Percent of “Yes” Responses to BF at Discharge by GA Health District for 2 Insurance Types

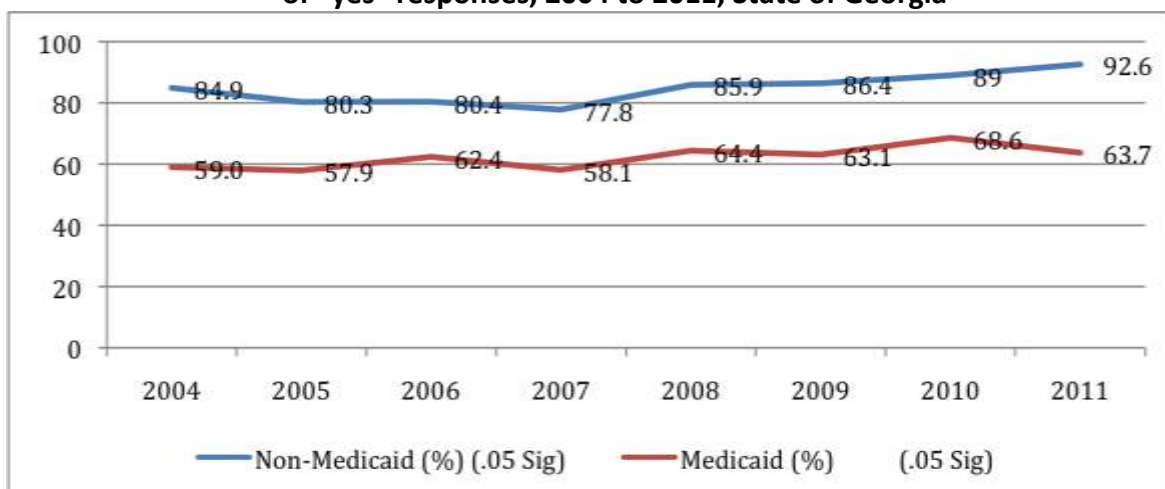
HEALTH DISTRICT (HD)	# BIRTHS (Source: OASIS, 2012)	Medicaid: Total # “YES” Responses (2012)	Medicaid: % of Yes Responses (2012)	Private: Total # “YES” Responses (2012)	Private: % of Yes Responses (2012)
Clayton County HD (Jonesboro) Total	4155	818	34.7	547	67.4
Coastal HD (Savannah) Total	9205	1770	45.5	1598	72.2
Cobb/Douglas HD Total	11090	2833	74.9	4744	86.8
DeKalb HD Total	11003	4024	83.4	3417	88.5
East Central HD (Augusta) Total	6366	1929	54.3	1405	82.6
East Metro HD (Lawrenceville) Total	13421	3724	76.3	4335	84.3
Fulton HD Total	12622	2765	60.9	4666	85.7
LaGrange HD Total	9247	2411	54.7	3059	80.1
North Central HD (Macon) Total	6745	1616	41.4	1574	78.5
North Georgia HD (Dalton) Total	5337	1320	74.5	1818	83.7

HEALTH DISTRICT (HD)	# BIRTHS (Source: OASIS, 2012)	Medicaid: Total # "YES" Responses (2012)	Medicaid: % of Yes Responses (2012)	Private: Total # "YES" Responses (2012)	Private: % of Yes Responses (2012)
North HD (Gainesville) Total	7382	2583	82.4	2487	88.7
Northeast HD (Athens) Total	5747	1501	57.1	1799	81.4
Northwest HD (Rome) Total	7843	2301	60.3	2321	79.9
South Central HD (Dublin) Total	1696	372	33.0	229	64.9
South HD (Valdosta) Total	3493	1003	43.1	317	53.6
Southeast HD (Waycross) Total	4764	1324	45.1	603	65.7
Southwest HD (Albany) Total	4770	718	38.6	339	67.3
West Central HD (Columbus) Total	5226	1019	39.5	672	76.5
2012 Totals	130,112	34,031	58.4%	35,930	82.1%

National Data:

Chart 3 below summarizes Georgia data analyzed by CDC, from 2004 to 2011, regarding whether a mother has ever breastfed or pumped breast milk to feed their new baby after delivery.¹⁴

Chart 3. Have you ever breastfed or pumped breast milk to feed your new baby after delivery? % of "yes" responses, 2004 to 2011, State of Georgia



Key Question #2: What is the estimated number of Georgia women on Medicaid who would need or utilize the services of International Board Certified Lactation Consultants (IBCLCs) if these health care providers were available?

The latest published data shows that in 2012, Georgia had 130,112 live births. Of those deliveries, approximately 44.8% were Medicaid recipients⁹ (58,304 women). Of the 58,304 women, 61.17% (as stated above) will initiate breastfeeding. Therefore, Georgia has an estimated 35,665 breastfeeding Medicaid recipients. Research indicates that approximately 75% of BF mothers have difficulty;^{15,16,17,18} therefore, in 2012, Georgia had approximately 26,748 women on Medicaid who could have benefited from the assistance of an IBCLC. There is a related issue regarding whether every women who requires breastfeeding clinical care has access to an IBCLC in her area. As explored further below, it is clear that Georgia is experiencing a shortage of IBCLCs to support BF initiation, duration and education. Strategies to improve this situation may include licensure, increasing the number of baby-friendly hospitals, and supporting education and certification for breastfeeding peer counselors in the WIC setting to achieve the requirements to obtain IBCLC designation.

IBCLC Staffing Requirements

A 2006 study reviewed lactation program productivity reports at a large teaching hospital with an estimated 4200 births per year.¹⁹ The study examined hours worked by IBCLCs over two years and categorized these hours into specific activities. Then, the authors developed ratios for “optimal IBCLC staffing” for each activity. Information from the publication is summarized below:

- mother/baby inpatient requires 1 full-time equivalent (FTE) per 783 BF couplets;
- neonatal intensive care unit (NICU) inpatient requires 1 FTE per 235 infant admits;
- mother/baby outpatient requires 1 FTE per 1292 BF couplets discharged;
- NICU outpatient requires 1 FTE per 818 BF infants discharged;
- telephone follow-up requires 1 FTE per 3915 BF couplets or infants discharged;
- education requires 0.1 FTE per 1000 deliveries; program development/administration requires 0.1 FTE per 1000 deliveries; and
- research requires 0.1 to 0.2 FTE total.

In July 2010, the United States Lactation Consultant Association (USLCA) released staffing recommendations for the inpatient setting.²⁰ For a Level III (tertiary care) hospital or facility, the recommendation is 1.9 FTEs per 1000 deliveries per year. A Level II neonatal service hospital would have 1.6 FTEs and a Level I facility 1.3 FTEs per 100 deliveries per year.

¹⁵ Perrine CG, Scanlon KS, et al. Baby-friendly hospital practices and meeting exclusive breastfeeding intention. *Pediatrics*. 2012 Jul;130(1):54-60.

¹⁶ Odom E et al. Reasons for earlier than desired cessation of breastfeeding. *Pediatrics*. 2013 Mar;131(3):e726-32.

¹⁷ Wagner EA, Chantry CJ, et al. Breastfeeding concerns at 3 and 7 days postpartum and feeding status at 2 months. *Pediatrics*. 2013 Oct;132(4):e865-75.

¹⁸ Chantry CJ. Supporting the 75%: Overcoming barriers after breastfeeding initiation. *Breastfeed Med*. 2011 Oct;6:337-9.

¹⁹ Mannel R, Mannel RS. Staffing for hospital lactation programs: Recommendations from a tertiary care teaching hospital. *J Hum Lact* 22(4), 2006.

²⁰ United States Lactation Consultant Association. International board certification lactation consultant staffing recommendations for the inpatient setting. 2010 July. Retrieved November 21, 2014 from: http://www.ilca.org/files/USLCA/Resources/Publications/IBCLC_Staffing_Recommendations_July_2010.pdf

Considering the inpatient and outpatient ratios presented in the Mannel study, the USLCA, CDC and the U.S. Surgeon General, data shows Georgia has an insufficient number of IBCLCs.

- The Surgeon General’s report³ recommends 8.6 IBCLCs for every 1,000 births. Currently, CDC indicates Georgia has 2.5 IBCLCs per 1,000 births.⁸ Using these basic numbers, GA’s current shortage is 6.1 IBCLCs per 1000 births.
- Going back to key question #2, one might propose that virtually 100% of Georgia women may “need” the services of an IBCLC immediately after birth, even if the mother is having a second or third child. This will ensure that successful, sustained BF occurs. In Georgia, with initiation rates at 68.2% and an estimated 326 full-time IBCLCs available to provide services,²¹ it is clear that far fewer mothers who may want help can currently access IBCLC services. [For the purpose of this analysis, we assume 326 full-time IBCLCs are providing services as it is unknown how many are not practicing lactation services on a full-time basis in the state.] The GDPH reports that, in 2012, Georgia had 130,112 births.²² Using the Surgeon General’s suggested ratio, Georgia should have a total of 1,119 IBCLCs to provide services to 130,112 birthing mothers.
- A more realistic estimate considers the fact that approximately 68.2% of the 130,112 (n=88,736) mothers who had a baby in 2012 initiated BF. Thus, 763 full-time IBCLCs would be required to provide the services recommended by the Surgeon General at the service rate of 8.6 per 1000 births.

Key Question #3: What is the estimated cost to Georgia Medicaid if each Medicaid mother who has a breastfeeding problem accesses clinical lactation assistance from an IBCLC, with an initial visit and a follow-up visit?

The estimated costs to Georgia Medicaid to provide 100% of Georgia’s breastfeeding Medicaid mothers two visits with an IBCLC would be **\$3.48 million** (Table 6). One issue to consider: In 2012, there were 14,847 “Other” payment types and 7,605 “Unknown²³” payment types reported inclusive of “yes,” “no,” and “unknown” responses. Of those 22,452 Other/Unknown responses, 5,309 (23.6%) of certificates indicated “unknown” with regard to BF at discharge. Since insurance type is self-reported by the mother or a hospital staff member, it is almost certain that a subset of the 22,452 Other/Unknown responses should be classified within the Medicaid results, but what percentage cannot be estimated. Because of the high percentage of unknown/other responses in Georgia’s live birth certificate data, the CDC PRAMS trend data to estimate the baseline BF measure for Georgia.

The Medical Assistance Plans Division of the Georgia Department of Community Health (“Georgia Medicaid”) would ultimately determine the reimbursement fee schedule for IBCLC services. Georgia Medicaid may use a “time based unit” model similar to the fee structure that Georgia Medicaid uses for dietitians or a “visit based” billing model.

²¹ United States Lactation Consultant Association. Statistical report for USLCA. November 8, 2013. Retrieved November 20, 2014 from: uslca.org/wp-content/uploads/2013/02/IBLCE-Stats-on-IBCLCs.pdf. *Note: Number of IBCLCs within the 326 who are not practicing full-time is unknown.*

²² Georgia Department of Public Health. Online Analytical Statistical Information System. Retrieved November 10, 2014 from <https://oasis.state.ga.us/>

²³ * This means no answer was marked on the birth certificate form.

Time-Based Unit Billing:

Currently, in Georgia, Medicaid pays doctors using the federal Medicare fee schedule, based on CPT codes.²⁴ Payments are made based on the CPT codes used. The ICD-9 diagnosis codes are provided by the provider to further clarify (justify) the “level” used for the CPT codes in terms of procedures completed or services performed.

Some GA IBCLCs have successfully billed for lactation services using CPT code 98960 – education and training for patient self-management by a qualified, non-physician health care professional. Depending on patient need, one or two units may be billed with this code. GA Medicare/Medicaid reimburses \$24.80 for a unit under code 98960. If IBCLCs were able to bill directly:

1. Medicaid would be billed a total of $\$24.80 \times \text{three } 15\text{-minute units} = \74.40 .
2. Private insurers would be paying $\$24.80 + 15\% = \$28.52 \times \text{three units} = \85.56 .

The Perinatal Health Committee of the North Carolina (NC) Child Fatality Task Force, a legislative study commission, completed an analysis of lactation support services in 2013.²⁵ Using the NC cost calculation model with some modifications for “realistic” goal attainment and data availability, a summary for GA is presented in Table 6.

Table 6. Cost to Georgia Medicaid using Time Based Unit Billing

Georgia Births, 2012	130,112
Births Covered by Medicaid, 2012 ²⁶	58,304
Estimated Number of Women on Medicaid initiating BF from GA Live Birth Certificate data = 61.17%	35,665
Estimated Number of Women who need lactation support visit (estimated at 75%)	26,748
Estimated Number of Lactation Support Visits (1 initial & 1 follow-up)	34,772
Estimated Cost of Visits at 100% utilization (assuming \$100/visit)	\$3.48 million

The \$100 value for cost of visits cited above is calculated considering a cost of \$25.00 per unit (rounded up from the \$24.80 cited on p. 13) and includes an initial BF counseling segment of one 45-minute (three 15-minute units) period and one 15-minute follow-up visit. Preliminary cost analysis indicates that coverage of lactation support services by GA Medicaid would not exceed \$3.48 million annually.

²⁴ Georgia Department of Community Health. Requirements to Receive the ACA Primary Care Physician Rate Increase. 2013. Retrieved December 19, 2014 from: <https://dch.georgia.gov/sites/dch.georgia.gov/files/ACA%20Rate%20Increase%20Guide%20FAQ%20AUG-1-FINAL.pdf>

²⁵ North Carolina Child Fatality Task Force, Perinatal Health Committee. Lactation support services cost/benefit analysis. Retrieved November 24, 2014 from: <http://www.ncleg.net/DocumentSites/Committees/NCCFTF/Perinatal%20Health/2013-2014/PHC%20-%20Lactation%20Cost%20Benefit%20Estimates.pdf>.

²⁶ Georgia Department of Public Health. Vital Records Live Birth Certificate Data 2009-2012.

E & M Coded “visit based” billing:

Right now in Georgia, there appears to be much variance for this fee-for-service care, ranging from \$50-\$202 from sixteen different sources. Some of the pricing depends on the length of the evaluation and the place for care--whether the care is rendered on hospital premises, in a physician’s office or rendered in the patient’s home. The average of these sixteen different fees is \$138.69 for an initial visit.²⁷

Assuming that Medicaid will discount the private marketplace 15-20%, Medicaid is likely to get interest in participation at \$110 for an initial consultation and \$40 for a follow-up visit.

Key Question #4: After examining the 1999 Ball study results, what would the costs be if updated in today's dollars? What is the cost to Georgia of suboptimal breastfeeding rates?

The Ball study²⁸, published in 1999, analyzed the records of 1000 healthy born HMO insured babies who were breastfed for three (3) months against 1000 healthy born HMO insured babies who were formula fed, and looking **only** at the three (3) most common illnesses during the first year of life (ear infections, lower respiratory infections and gastrointestinal infections) and after adjusting for confounders (maternal education, and maternal smoking), researchers determined that in aggregate, the 1000 babies who were not breastfed had 2033 extra doctor visits, 212 extra days in the hospital, and 600 extra prescriptions. The average additional HMO cost per baby who was not breastfed, in 1995 dollars, was between \$331-\$475.

Updating the Ball figures to 2014 dollars, the average additional cost per baby who is never breastfed compared to babies who are breastfed for three months would be at least \$750 per baby.

Table 7 below summarizes the cost comparisons between 1995 and 2014. All figures in this updated analysis are calculated based upon Ball’s original study and upon the Consumer Price Index (CPI) for Medical care documented in the Bureau of Labor Statistics.

Table 7. Ball Study <i>Type of Service</i>	<i># Services/1000 Never Breastfed</i>	<i>Cost/Service</i>	<i>Total Cost (1995)</i>	<i>Total Cost (2014)</i>
Office visits	1693	\$65.75	\$111,315	\$215,954
Follow-up visits	340	\$65.75	\$22,355	\$43,369
Medications				
LRI	29	\$3.80	\$110	\$183
OM	580	\$13.05	\$7,569	\$12,591
Chest Radiography	51	\$36.00	\$1,836	\$3,186
Days of hospitalization				
LRI	30	\$886.16	\$26,585	\$67,125
OM	182	\$886.16	\$161,281	\$407,226

²⁷ Gober M, Curl B. Costs of outpatient care for IBCLC lactation services: an informal survey of 10 hospitals and 6 private practice IBCLCs, January 19-26, 2015. Personal Communication. Note: Estimates suggest that more than 75% of clinical outpatient IBCLC services offered in Georgia are provided via these hospitals and private practices.

²⁸ Ball TM, Wright AL. Health Care Costs of Formula-feeding in the First Year of Life. *Pediatrics*. 1999 April;104(4): 870-876.

Total	\$331,051	\$749,634
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	1995	2014
CPI for Medical care	224.7	435.92
Medical care commodities	207.2	344.69
Medical care services	228.5	465.17
Pro Medical care services	204.7	355.17
Hosp and related services	291.4*	735.77

*: Data in 1995 was not recorded; 1998 is used as this is the earliest recorded number for this measure in the BLS report. Due to the fact that medical inflation is rising on an annual basis, using the 1998 index will underestimate the magnitude of inflation on this specific service.

Note: Numbers could be larger or smaller in the state of Georgia due to # services/1000 utilized as well as basic costs for each service with respect to different HMO pricing.

According to Ball, in year 1995, for every 1000 newborns never breastfed, there will be, on average, 1693 office visits and the expected costs were \$111,315. If this trend maintains or keeps relatively stable on an annual basis, the same statistics will generate \$215,954 in year 2014 due to medical cost inflation. In terms of follow-up doctor visits, for every 1000 newborns never breastfed, there will be, on average, 340 encounters in year 1995. The 1995 expected total costs were calculated to be \$22,355. This figure will be inflated to \$43,369 in today's dollars.

Among children, infectious illness is a major reason for medical consultation. Lower respiratory tract illness (LRI) such as bronchiolitis, croup, bronchitis, and pneumonia are common reasons for medical services provided to children. On average, for every 1000 newborns never breastfed, there will be 29 newborns who have medication treatment due to LRI in year 1995 with the expected total costs at \$110. On a consistent assumption, this cost in year 2014 will be \$183. According to Ball, for children younger than 15 years of age, otitis media (OM) is the most frequent diagnosis in physician office practices. If total cost on OM treatment using medication was estimated to be \$7,569 in year 1995, this cost will translate to \$12,591 in today's dollars.

By no means is medication the sole treatment for LRI or OM, hospitalization is sometimes utilized due to illness severity. On average, 30 days of hospitalization were spent due to LRI for every 1000 newborns not breastfed in year 1995. The costs were estimated to be \$26,585 in 1995, and are projected to be \$67,125 in today's dollars. Further, for every 1000 newborns not breastfed, there were 182 expected days of hospitalization due to OM in year 1995. The costs on OM were \$161,281 back then, but would be estimated at \$407,226 in 2014.

Chest radiography is utilized to detect any lung problems. For every 1000 newborns in year 1995 with no BF exposure whatsoever, the correlated costs were estimated to be \$1,836 in total. Based on a similar assumption, the cost for chest radiography would increase to an estimated \$3,186 in 2014.

Bartick and Reinhold published a cost analysis of suboptimal breastfeeding and its impact on the pediatric population.²⁹ This study concludes that, if the Healthy People 2010 BF goals were met, \$2.2 billion in savings and 741 infant deaths would have been prevented. The incidence and cost information from this analysis and the updated Ball study information are applied to Georgia data to the extent possible. This analysis assumes that support of IBCLCs and other targeted BF promotion strategies currently used in GA would lead to Healthy People 2020 goal attainment, i.e., proportion of infants who are ever BF is 81.9%, and the proportion of infants who are BF at 6 months is 60.6%. The 2012 Live Birth Certificate data for those indicating “no” BF at discharge are used as the baseline for the Medicaid population in Table 8 below.

Table 8: Costs to GA in 2012 associated with Sub Optimal BF rates in Medicaid Infants

Condition*	Incidence	Direct Costs	Potential Costs to GA in 2012 associated with Non-BF Initiation in Medicaid Infants
Otitis Media (OM) n=10,488 infants	1.9 episodes, children 6-11 months ³⁰	\$291 ³¹ per episode	\$5,798,966
Lower Respiratory Tract Infection (LRT) n=3,255 infants	29 of every 1000 newborns never BF	\$183 medication \$67,125 hospitalization	\$6,353,539
Necrotizing Enterocolitis (NEC) LBW = 12,182; VLBW = 2,347	0.00308 low birth weight (LBW) infants; 0.0414 very LBW (VLBW) infants	<i>Medical Costs:</i> LBW \$81,219; VLBW \$140,858 <i>Surgical Costs:</i> LBW \$150,406; VLBW \$260,506	\$7,140,878

*OM infant number based on GA Live Birth Certificate data in 2012, percent of “no” responses to BF at discharge. LRT and LBW/VLBW infant numbers retrieved from GDPH OASIS data for 2012; estimated 1/3 of NEC infants need surgery.

The most costly of these conditions that can be positively impacted by BF is NEC. NEC is potentially responsible for up to 20% of NICU expenses annually.³² One study estimated that feeding 10 babies with breast milk exclusively can prevent one case of NEC and treating eight infants with breast milk can prevent one case of surgical NEC or death.³³ The costs above do not consider the indirect costs associated with treating or caring for infants with these conditions (such as work time lost by parents, personal expenses incurred, etc.). These expenses could be considerable if the infant has a serious condition such as NEC requiring extensive hospitalization, e.g. 60 or more days.³⁸

²⁹ Bartick M, Reinhold A. The Burden of Suboptimal Breastfeeding in the United States: A Pediatric Cost Analysis. *Pediatrics*. 2010 May;125(5):e1048-56.

³⁰ Chonmaitree T, Revai K, Grady JJ, et al. Viral upper respiratory tract infection and otitis media complication in young children. *Clin Infect Dis*. 2008;46(6):815-823.

³¹ Agency for Healthcare Research and Quality. Management of acute otitis media, appendix A. Available at: www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat1.chapter.21026.

³² Gephart SM, McGrath JM, Effken JA, Halpern MD. Necrotizing enterocolitis risk: State of the science. *Advances in Neonatal Care*. 2012;12(2):77-89.

³³ Sullivan S, Schanler RJ, Kim JH, et al. An exclusively human milk-based diet is associated with a lower rate of necrotizing enterocolitis than a diet of human milk and bovine milk-based products. *J Pediatr*. 2010;156(4):562-567.

In summary, Georgia's Medicaid program could have saved an estimated \$19,293,383 conservatively in 2012 in direct medical costs for just THREE of the many healthcare conditions which breastfeeding reduces if Georgia mothers were optimally breastfeeding.

Summary

It is clear from this analysis that there are short- and long-term costs and cost savings associated with lactation counseling services and improved breastfeeding initiation and duration. Due to the lack of published studies, documented services and impact of IBCLCs compared to other healthcare professionals who are providing BF support, and complex coding and billing processes; it is unclear if the increased availability of IBCLC services (specifically) contributes to the cost savings associated with BF. At the most basic expense level, one could hypothesize that because the rate paid for IBCLC service provision per billable unit costs the state of Georgia less than that billed by a physician or nurse practitioner, cost savings would be realized if these individuals were licensed. Further, the costs associated with specific conditions, that could be averted if a higher percent of mothers, particularly low income mothers, were to initiate and opt for exclusive breastfeeding for three months, are considerable.

At the state level, it is important to contrast the costs associated with covering basic lactation support services by GA Medicaid at \$3.48 million annually with the estimated costs to the state of Georgia in 2012 for treating infant conditions in the first year of life exacerbated due to no breastfeeding at \$19 million, a net savings of more than \$15 million annually. While more in-depth cost-benefit and cases averted analyses is necessary, this comparison suggests the investment in increasing the number of and services available through IBCLCs is warranted.

More research is needed in a number of areas that could further the case for IBCLC services and licensure in Georgia:

- 1) Demonstrating the economic value of employing IBCLCs to both health care facilities (i.e., hospitals and clinics) and public and private insurers;
- 2) Documenting BF support services including who is providing them (IBCLCs vs. other professionals), when they are provided, how much counseling time is provided, and the reimbursement rates associated with specific services/time by specific providers;
- 3) Exploring methods to increase rates of BF in GA among populations with current low rates and among populations at greatest risk for childhood obesity and chronic disease;
- 4) Implementing worksite BF interventions in large employers that utilize IBCLC services and support delivered via telehealth or other technologies; and
- 5) Detailing the impact of Georgia 5-star hospital program on BF rates by mothers in those facilities and examining the outcomes by those facilities with IBCLCs and those without IBCLCs.

The Georgia Health Policy Center appreciates the opportunity to prepare and submit this report to Healthy Mothers Healthy Babies Coalition of Georgia.

Appendix A

Medicaid Mothers responses to Breastfeeding Questions, 2004 to 2011

Georgia Prenatal Care Information - All Available Years								
During any of your prenatal care visits, did a doctor, nurse, or other health care worker talk with you about breastfeeding your baby?								
Answered: Yes								
Year	2004	2005	2006	2007	2008	2009	2010	2011
Non-Medicaid (%) (.05 Sig)	77	85.6	79.9	79.2	84	82.9	84.8	87.4
Sample size	475	530	602	229	309	285	320	355
Medicaid (%) (.05 Sig)	87.9	86.2	89.6	89.9	94.2	92.9	93.5	93.2
Sample size	820	971	1086	418	568	454	706	1031

Answered: No								
Year	2004	2005	2006	2007	2008	2009	2010	2011
Non-Medicaid (%) (.05 Sig)	23	14.4	20.1	20.8	16	17.1	15.2	12.6
Sample size	121	100	134	53	54	60	57	66
Medicaid (%) (.05 Sig)	12.1	13.8	10.4	10.1	5.8	7.1	6.5	6.8
Sample size	108	112	137	49	51	48	48	77

Georgia Breastfeeding Information - All Available Years								
Were you still breastfeeding 4 weeks after delivery?								
Answered: Yes								
Year	2004	2005	2006	2007	2008	2009	2010	2011
Non-Medicaid (%) (.05 Sig)	72.8	68.7	70	65.8	75.1	77.3	73.4	83.1
Sample size	420	415	513	199	268	253	270	307
Medicaid (%) (.05 Sig)	47.3	44.8	46.8	43.5	50.7	48.3	51.6	49.8
Sample size	389	459	561	204	308	208	308	438

Answered: No								
Year	2004	2005	2006	2007	2008	2009	2010	2011
Non-Medicaid (%) (.05 Sig)	27.2	31.3	30	34.2	24.9	22.7	26.6	16.9
Sample size	166	198	217	82	92	79	103	103
Medicaid (%) (.05 Sig)	52.7	55.2	53.2	56.5	49.3	51.7	48.4	50.2
Sample size	526	590	660	249	297	279	427	664

Georgia Breastfeeding Information - All Available Years								
Were you still breastfeeding 8 weeks after delivery?								
Answered: Yes								
Year	2004	2005	2006	2007	2008	2009	2010	2011
Non-Medicaid (%) (.05 Sig)	64.4	60.5	60.3	57.6	63.2	65.9	61.4	71.7
Sample size	355	349	445	165	221	205	228	262
Medicaid (%) (.05 Sig)	38.9	36.8	38.2	32.7	39.0	35.2	35.5	39.3
Sample size	299	348	422	156	238	153	223	328

Answered: No								
Year	2004	2005	2006	2007	2008	2009	2010	2011
Non-Medicaid (%) (.05 Sig)	35.6	39.5	39.7	42.4	36.8	34.1	38.6	28.3
Sample size	231	264	285	116	139	127	145	148
Medicaid (%) (.05 Sig)	61.1	63.2	61.8	67.3	61.0	64.8	64.5	60.7
Sample size	616	701	799	297	367	334	512	774

