

Saving Money, Saving Lives— Preventing Low Birthweight Adds Up

Summary: Our Theory of Change workgroup studied the fiscal costs associated with low-birthweight babies. The workgroup then estimated potential savings when Georgia Family Connection county collaborative organizations implement low-birthweight prevention strategies. The study revealed that there are substantial cost savings when counties implement collaborative prevention efforts.

When policymakers, service-delivery professionals, and concerned taxpayers consider implementing prevention services, they often ask, “How much will this prevention effort cost?”

The opposite—but equally important—question they also must ask is, “What is the cost to Georgia if we do not implement this prevention effort?”

Fully answering this question requires us to explore two related questions:

1. How many cases of the undesired outcome will we prevent by implementing this program?
2. How much will each prevented case save us in terms of estimated public-sector costs?

These questions by no means suggest that the foremost value of a prevented addict, HIV-infected person, child-abuse victim, or victim of any other social problem is economic. The human aspect remains foremost. In times of lean budgets, however, answering the economic question is valid and necessary.

In this study we focus on the economic costs associated with infants born at low birthweight in Georgia. Identifying these costs and estimating the number of infants who would have been born at low birthweight in the absence of intervention will give us an estimate of the savings associated with such intervention.

Low-Birthweight Costs in Georgia

In 2007 approximately 9.1 percent of all Georgia infants weighed less than 5 lbs., 8 oz. at birth—the standard definition of low birthweight (LBW).¹ This rate exceeded the national average of 8.2 percent.

LBW babies suffer higher rates of infant mortality. Those who survive incur substantial costs associated with health and development. Health risks associated with LBW include:

- high blood pressure,
- cerebral palsy,
- heart and intestinal problems,
- blindness,
- deafness,
- lung disease, and
- asthma.

LBW also is linked to lower IQ test scores, lower educational achievement, behavioral problems, cognitive development delays, and reduced employment and earnings as adults.

Medical costs increase as birthweight decreases. In comparison to normal births, LBW infants remain close to 11 days longer in the hospital— an additional cost of \$14,500 per infant. Newborns in the very low-weight category — less than 3 lbs., 5 oz. — could avoid, with as little as eight ounces added weight, initial year medical costs of \$14,000 on average. A baby weighing less than 2 lbs., 3 oz. will incur costs of \$65,500 on average in delivery and initial care. The smallest infants, weighing less than 1 lb., 10 oz., will average 98 days in the hospital.

Costs associated with LBW extend beyond the initial hospital stay. A 1998 Rand study estimated medical costs during the first year for LBW-category infants.

Infants born weighing less than 3 lbs., 5 oz. who:	Rate	First-Year Costs
Died during the first day of life	23%	\$6,310
Died during the remainder of their initial hospitalization	10%	\$58,800
Survived initial hospitalization but died during the first year of life	3%	\$112,120
Survived the first year of life	64%	

First-year costs of low birthweight

Medicaid covers 42 percent of all LBW infants. For LBW babies born in 2005, Medicaid covered \$6.4 billion of expenses during their first five years of life. Costs associated with LBW are even higher when accounting for factors beyond hospital expenses, such as lost productivity and increased educational support. The total costs of LBW have been estimated conservatively at \$26.2 billion per year (see Figure 1). Based on the percentage of the nation's LBW infants born in Georgia in 2007, Georgia incurred approximately \$1 billion of this total cost.

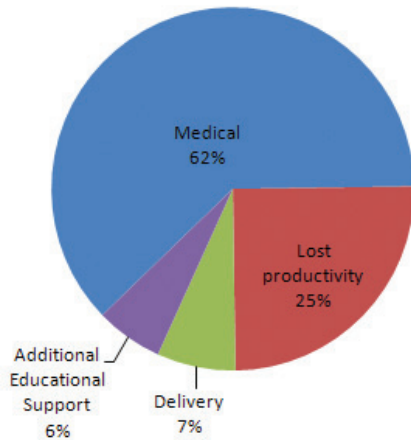


Figure 1. Components of the Nation's Total Low-Birthweight Cost (\$26 billion annually)

Effective Prevention Strategies

We know about some relatively inexpensive strategies that work to prevent LBW. The likelihood of women giving birth to LBW infants can be greatly reduced if they:

- maintain a healthy weight before and during pregnancy,
- are free of infections and up to date on vaccinations,
- receive early and regular prenatal care,
- take prenatal vitamins,
- do not smoke, and
- control chronic conditions such as diabetes and hypertension.

Effective LBW prevention strategies address these issues before conception and before childbirth.²

What We Are Doing

At Georgia Family Connection Partnership (GaFCP) we look beyond the effects of a single prevention program. We seek to answer this key question:

What value is added by the coordinating role of Family Connection collaborative organizations?

Recent findings from our Theory of Change workgroup indicate that although LBW has been on the rise in recent years, increases were smaller in Georgia counties with Family Connection collaborative organizations than in comparison counties from other southeastern states. Analyses suggest that the 25 Georgia Family Connection counties that targeted LBW for at least two years had 50 fewer low-weight births than had they not targeted LBW. **This equates annually to approximately \$725,000 in initial hospital cost savings, and \$3.7 million in total savings.**

These conservative cost-savings estimates are at least partially attributable to Family Connection collaborative efforts. The findings can be considered in light of the \$50,000³ in annual base state funding GaFCP provided to each collaborative organization. If these 25 collaborative organizations accomplished no other benefits with their entire base funding devoted to LBW, it appears that each dollar GaFCP invested would return more than three dollars in savings. This 3-1 ratio would be even higher to the extent that these collaboratives devoted only part of their budgets to this outcome, but would be lower to the extent that other funds were used in addition to the collaborative budgets.

Endnotes

- ¹ Kids Count Data Across States; obtained September 2010 from: datacenter.kidscount.org/data/acrossstates/Rankings.aspx?ind=5425
- ² Improving Infant Health: Addressing Low Birthweight in Georgia (2009). Atlanta GA: GaFCP. fcp.gafcp.org/lbw/lbwoverview.htm
- ³ GaFCP funding to collaboratives has declined in recent years due to budget constraints.

Evaluation Snapshot examines how Georgia Family Connection county collaboration affects indicators of child, family, and community well-being in communities across the state. This series is based on reports from the GaFCP Theory of Change Workgroup, a team of researchers from EMSTAR Research and Georgia State University.

GaFCP is a public-private nonprofit created and funded by the state of Georgia and investors from the private sector. We support Georgia Family Connection, a statewide network of 159 county collaborative organizations committed to improving the quality of life for children and families.

Please send questions or comments to Steve Erickson, Ph.D. at eval@gafcp.org. For more information go to gafcp.org.