

The Economic and Fiscal Impact of Children's Healthcare of Atlanta



Prepared for:

Children's Healthcare of Atlanta



Children'sSM
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Executive Summary

In 2009, Children’s Healthcare of Atlanta (Children’s) engaged the Enterprise Innovation Institute (EI²) at Georgia Tech to assess their economic and fiscal presence, as well as their economic and fiscal impact in the State of Georgia. Children’s has once again engaged EI² to update this analysis using 2014 data.

The economic presence of Children’s refers to the total interaction of Children’s with the Georgia economy. It simply estimates how much economic activity is being supported by the flow of resources through Children’s and how those resources then interact with the economy. It does NOT attempt to discern what resources are new to the economy because of Children’s, nor does it address the issue of how the Georgia economy would be hurt if Children’s did not exist. As can be seen in Table E-1, Children’s had operating revenue of approximately \$1.3 billion in 2014 and employed more than 10,500 people on a full- or part-time basis who were paid (in salaries, wages, and benefits) more than \$740 million. That activity circulates through the economy and generates more than \$2.8 billion in total economic output and provides employment to nearly 22,000 people earning more than \$1.2 billion.

Table E-1
Economic Presence of Children’s Healthcare of Atlanta – 2014
 (Income and Output in Millions of Dollars)

	Employment	Wages & Salaries	Economic Output
Direct	10,522	\$741.9	\$1,366.3
Indirect & Induced	11,378	\$512.3	\$1,439.9
Total	21,900	\$1,254.2	\$2,806.2

Source: Georgia Tech Enterprise Innovation Institute using an IMPLAN model for the State of Georgia. Totals may not add due to rounding.

In contrast to economic presence, the economic impact of Children’s represents the difference in the Georgia economy between having and not having Children’s. The focus here is on resources that would likely not exist in the state were it not for Children’s. This includes 1) resources that Children’s brings in from outside the state, and 2) resources that are already in Georgia, but would leave the state if Children’s did not exist. Obviously, economic impact will be lower than economic presence because many of the services provided by Children’s are available from other providers who would be able to fill in the gap left by Children’s. However, some services are not available from other providers, and some, though available, would not be able to capture all of the demand. A detailed analysis by Children’s staff

of the services they provide and the alternative providers in Georgia allowed for an estimate of the extent to which Children’s patients would likely seek treatment outside of Georgia if Children’s did not exist. As can be seen in Table E-2, the operating income associated with medical treatment that would not occur in Georgia but for Children’s is approximately \$766 million. The provision of these services employed more than 5,900 people on a full- or part-time basis who were paid (in salaries, wages, and benefits) more than \$416 million. Again, based on the structure of the Georgia economy in 2014, that level of economic activity supported over \$1.5 billion in economic output across the state and the employment of nearly 12,300 people earning more than \$700 million in wages, salaries, and benefits.

Table E-2
Economic Impact of Children’s Healthcare of Atlanta – 2014
 (Income and Output in Millions of Dollars)

	Employment	Wages & Salaries	Economic Output
Direct	5,904	\$416.3	\$766.6
Indirect & Induced	6,384	\$287.5	\$807.9
Total	12,288	\$703.7	\$1,574.5

Source: Georgia Tech Enterprise Innovation Institute using an IMPLAN model for the State of Georgia. Totals may not add due to rounding.

Fiscal impact analysis takes the above results and estimates how those levels of economic activity influence both the expenditures made by government and the revenues that will accrue to government. When state revenues exceed expenditures, the result is positive net revenue, which is analogous to what the private sector would call “profit.” State government expenditures are predominantly a function of population, while revenues tend to be predominantly a function of income. As such, the relatively high wages paid by Children’s result in significant net revenues to Georgia. Table E-3 shows both the fiscal presence and fiscal impact of Children’s on the State of Georgia for 2014.

Table E-3
Fiscal Presence and Fiscal Impact of Children’s Healthcare of Atlanta – 2014
 (Millions of Dollars)

	Fiscal Presence	Fiscal Impact
Revenues	\$134.7	\$75.6
Expenditures	\$66.8	\$37.5
Net Revenue	\$67.9	\$38.1

Source: Georgia Tech Enterprise Innovation Institute using a Fiscal Impact Model for the State of Georgia. Totals may not add due to rounding.

SECTION 1

Introduction

Nearly 20 years ago, Egleston Children’s Healthcare System and Scottish Rite Medical Center merged to form Children’s Healthcare of Atlanta (Children’s). In 2006, Children’s assumed responsibility for the management of medical services at Hughes Spalding Children’s Hospital, growing the system to three hospitals with twenty-seven neighborhood locations.¹ The resulting organization is one of the largest pediatric health providers in the country and one of the top pediatric hospitals in the nation. In 2014, the three hospitals had 575 staffed beds, approximately 25,807 annual hospital admissions, and 845,845 outpatient visits, including 221,952 emergency room visits. The system treated 365,526 unique patients, from all 159 Georgia counties. There were 38,367 surgical procedures performed; 134,845 urgent care visits; 46,553 primary care visits; and 100,092 Nurse Advice Line contacts made from parents across the state. More than 1,800 pediatric physicians practice at the hospital system representing more than 60 pediatric specialties including 45 pediatric cardiologists practicing at 20 statewide locations. This is all supported by more than 10,500 employees.

Beyond these patient statistics, Children’s is heavily involved in both research and physician training. In 2014, Children’s incurred \$40.4 million related to Pediatric Research. This includes the cost of facilities, equipment and salaries to support research. Children’s collaborates with Emory University School of Medicine, Georgia Institute of Technology and other academic institutions and has more than 4,500 patients participating in active research studies. Advances in medicine and enhanced patient care are a direct result of this research. Children’s is affiliated with Emory’s Department of Pediatrics, one of the fastest-growing recipients of National Institutes of Health (NIH) funding in the country. It is now ranked among the top 10 in the country for NIH funding. Children’s also incurred \$8.1 million related to the cost of providing education to prospective physicians. This is net of the federal support of the graduate medical education program. Children’s is training the next generation of caregivers as the pediatric teaching site of Emory University School of Medicine and Morehouse School of Medicine, with 91 residents and 88 fellows. Sixty percent of the pediatric residents at Children’s have stayed in Georgia. Of those remaining in the state, 54 percent completed additional subspecialty training with Children’s.

In 2009, Children’s engaged the Enterprise Innovation Institute (EI²) at Georgia Tech to, among other things, assess the economic and fiscal impact of Children’s operation in Georgia. An estimate of the

¹ <http://www.choa.org/About-Childrens/Childrens-History>

economic and fiscal “presence” of Children’s on the State of Georgia was also performed which differs from “impact” in that it includes all resources used by Children’s, and not just those considered to be new to Georgia.

Now, Children’s has once again engaged EI² to update both the economic and fiscal presence as well as the economic and fiscal impact analysis originally done in the 2009 report. That report used 2008 data as the basis for the analysis and did a 10-year projection based on current operations at the time and how the Vision 2018 strategic plan would add to them. As such, the economic and fiscal impacts in that report were reported for 2008, and then projected out under the assumptions in that plan. In contrast, this report will use data from 2014 and will simply look at the economic and fiscal presence and impact that Children’s has in Georgia now that the plan has been implemented.

The data provided by Children’s provides the direct impacts needed to begin the analytical process. The results for both the economic “presence” and “impact” are estimated using the IMPLAN input-output model for Georgia modified to reflect the actual expenditure profile for employment and employee compensation. The fiscal analysis results for both the “presence” and “impact” are estimated using a regression-based fiscal model for the State of Georgia developed by EI². A similar model was used in the 2009 study, and the current version has been updated to reflect the latest revenue and expenditure patterns for the state.

SECTION 2

Economic Presence and Impact of Children’s

Below are estimates of how Children’s Healthcare of Atlanta (Children’s) interacts with the Georgia economy. As previously mentioned, two measures are presented — “economic presence” and “economic impact.” There are significant differences between these two measures which deserve further explanation.

Economic Presence vs. Economic Impact

When used in this report the term “economic presence” refers to the total interaction of Children’s with the Georgia economy. Clearly, Children’s provides some medical services that could be provided by other entities and the resources to pay for these services are already in the Georgia economy. If Children’s did not exist, some of those resources would stay in the state. So, “economic presence” does NOT address the issue of how the Georgia economy would be hurt if Children’s did not exist. Rather, it simply estimates how much economic activity is being supported by the flow of resources through Children’s and how those resources then interact with the economy.

On the other hand, the term “economic impact” estimates the difference in the Georgia economy between having and not having Children’s. The focus here is on resources that would likely not exist in the state were it not for Children’s. This includes 1) resources that Children’s brings in from outside the state, and 2) resources that are already in Georgia, but would leave the state if Children’s did not exist.

Both of these assessments are primarily measured by the number of jobs, amount of income, and level of economic output associated with economic activity. The “direct” effects quantify Children’s current activity and “total” effects estimate how that activity circulates through the economy in the form of additional spending by both industry and households (also called the “indirect” and “induced” impacts respectively).

Economic Presence of Children’s Healthcare of Atlanta

Children’s is a very complex corporate healthcare entity with several locations and varied ways in which services are procured and provided. For example, the Children’s hospitals are well known across Georgia and include Egleston, Scottish Rite, and Hughes Spalding. However, Children’s also includes the

Marcus Autism Center, the Sibley Heart Center, the Meridian Mark Plaza Children’s Surgery Center, urgent care facilities (e.g., Egleston Affiliated Services) and physician practices (e.g., Egleston Pediatric Group). Further, many doctors are not directly employed by Children’s, but are indistinguishable from those that are employed by Children’s in the performance of their duties. The analysis presented here is based on the operation of all these various entities for 2014. During that year, Children’s had operating revenue of approximately \$1.3 billion, and employed more than 10,500 people on a full- or part-time basis who were paid (in salaries, wages, and benefits) more than \$740 million. That translates into an average wage (including benefits) of more than \$70,000. Based on the structure of the Georgia economy in 2014, that level of economic activity is estimated to support over \$2.8 billion in economic output across the state and provides employment to nearly 22,000 people earning more than \$1.2 billion in wages, salaries, and benefits. Again, the total impacts include the direct activity of Children’s, the indirect activity (spending of other industries) and induced activity (spending of households) (Table 1).

Table 1
Economic Presence of Children’s Healthcare of Atlanta – 2014
 (Income and Output in Millions of Dollars)

	Employment	Wages & Salaries	Economic Output
Direct	10,522	\$741.9	\$1,366.3
Indirect & Induced	11,378	\$512.3	\$1,439.9
Total	21,900	\$1,254.2	\$2,806.2
Multiplier	2.08	1.69	2.05

Source: Georgia Tech Enterprise Innovation Institute using an IMPLAN model for the State of Georgia. Totals may not add due to rounding.

Economic Impact of Children’s Healthcare of Atlanta

As previously discussed in the introduction, the distinction between the “economic presence” of Children’s, and the “economic impact” of Children’s is the measure of the resources that would be lost to the state’s economy if Children’s did not exist. These resources can either be in the form of patients that come from out of state, or patients that would have to leave the state for treatment if Children’s did not exist. Obviously, economic impact will be lower than economic presence because many of the services provided by Children’s are available from other providers who would be able to fill in the gap left by Children’s. However, some services are not available from other providers, and some, though available would not be able to capture all of the demand. A detailed analysis by Children’s staff of the

services they provide and the alternative providers in Georgia allowed for an estimate of the extent to which Children’s patients would likely seek treatment outside of Georgia if Children’s did not exist. This analysis was done by service line (e.g., cardiology, neonatology, orthopedics, transplant, urology, etc.) and generally employed the following assumptions:

- **Inpatient Services** – Comparison was made to state data, by medical service category and patient age, for pediatric hospital services.
 - Any service where Children’s served greater than 75 percent of the patient services would not be provided elsewhere in Georgia if Children’s did not exist.
 - Any service where Children’s served between 25 to 50 percent of the patient services would not be performed elsewhere in Georgia for patients ages 0-4 if Children’s did not exist.
 - Any service where Children’s served between 25 to 50 percent of the patient services would be provided elsewhere in Georgia for 50 percent of patients ages 5-12.
- **Outpatient Services**
 - Assessment was made by medical service category and complexity, patient age, and the availability of viable alternative medical settings to identify the services that would leave the state if Children’s did not exist.
 - All activity performed by the Sibley Heart Center and the Marcus Autism Center would leave the state if Children’s did not exist.

The operating income associated with these assumptions (which were also used in the 2009 study) is approximately \$766 million. The provision of these services employed more than 5,900 people on a full- or part-time basis who were paid (in salaries, wages, and benefits) more than \$416 million. Again, based on the structure of the Georgia economy in 2014, that level of economic activity supported over \$1.5 billion in economic output across the state and the employment of nearly 12,300 people earning more than \$700 million in wages, salaries, and benefits (Table 2).

Table 2
Economic Impact of Children’s Healthcare of Atlanta – 2014
 (Income and Output in Millions of Dollars)

	Employment	Wages & Salaries	Economic Output
Direct	5,904	\$416.3	\$766.6
Indirect & Induced	6,384	\$287.5	\$807.9
Total	12,288	\$703.7	\$1,574.5
Multiplier	2.08	1.69	2.05

Source: Georgia Tech Enterprise Innovation Institute using an IMPLAN model for the State of Georgia. Totals may not add due to rounding.

SECTION 3

Fiscal Presence and Impact of Children’s

Fiscal impact analysis takes the measures of both economic presence and economic impact and estimates how those levels of economic activity influence both the expenditures made by government and the revenues that will accrue to government. With respect to the state government, while there are many revenue items, sales tax and income tax make up the majority of revenue. On the expense side, education is by far the largest component. Figures 1 and 2 below show the distribution of both state revenues and state expenditures resulting from the economic activity of Children’s.

Figure 1: Revenue Components

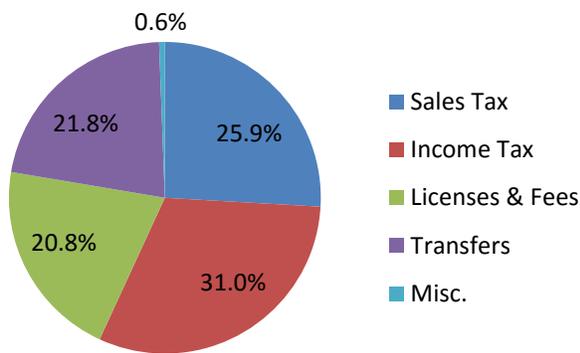
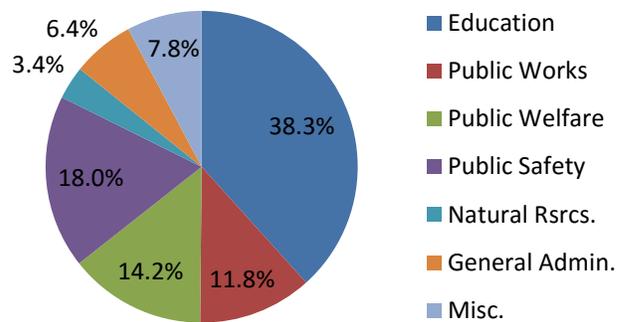


Figure 2: Expense Components



When state revenues exceed expenditures, the result is positive net revenue, which is analogous to what the private sector would call “profit.” State government expenditures are predominantly a function of population, while revenues tend to be predominantly a function of income. As such, the relatively high wages paid by Children’s result in significant net revenues to Georgia. As mentioned in the introduction, the model used here is a regression-based fiscal impact model for the State of Georgia developed by EI².

Fiscal Presence of Children’s Healthcare of Atlanta

As explained in Section 2, the economic presence of Children’s estimates how much economic activity is being supported by the flow of resources through Children’s and how those resources then interact with the economy. That economic activity produces both revenues and expenditures for the State of Georgia which represent the “fiscal presence” of Children’s on the state.² This fiscal presence is shown below in Table 3. The net revenue to Georgia’s state government is nearly \$68 million for 2014.

Table 3
Fiscal Presence of Children’s Healthcare of Atlanta – 2014
(Millions of Dollars)

<u>Revenue Categories</u>	
General & Selective Sales Tax	\$34.9
Individual & Corporate Income Tax	\$41.7
Licenses & Fees	\$28.0
Intergovernmental Transfers	\$29.3
Other Miscellaneous	\$0.8
Total Revenue:	\$134.7

<u>Expenditure Categories</u>	
K-12 State Education	\$25.6
Public Works/Transportation	\$7.9
Public Welfare	\$9.5
Public Health & Safety	\$12.0
Natural Resources	\$2.3
General Administration & Interest	\$4.3
Other Miscellaneous	\$5.2
Total Expenditures:	\$66.8

Total Net Revenue:	\$67.9
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Source: Georgia Tech Enterprise Innovation Institute using a Fiscal Impact Model for the State of Georgia.
Totals may not add due to rounding.

² Federal intergovernmental transfers are inextricably included in the expenditures and cannot be removed. As such, they are also included on the revenue side. These transfers are composed of all the elements of federal support, but are primarily associated with public welfare and transportation.

Fiscal Impact of the Economic Impact of Children’s Healthcare of Atlanta

Again, as explained in Section 2, the economic impact of Children’s estimates the difference in the Georgia economy between having and not having Children’s. Because many of the services provided by Children’s are available from other providers who would be able to fill in the gap left by Children’s, the economic impact is considerably less than the economic presence. Similarly, the fiscal impact is considerably less than the fiscal presence. However, this is a better representation of the actual government revenues and expenditures that accrue to the State of Georgia due to Children’s. The net fiscal impact of Children’s on the State of Georgia is \$38.1 million. The details are below in Table 4.

Table 4
Fiscal Impact of Children’s Healthcare of Atlanta – 2014
 (Millions of Dollars)

<u>Revenue Categories</u>	
General & Selective Sales Tax	\$19.6
Individual & Corporate Income Tax	\$23.4
Licenses & Fees	\$15.7
Intergovernmental Transfers	\$16.5
Other Miscellaneous	\$0.5
Total Revenue:	\$75.6
<u>Expenditure Categories</u>	
K-12 State Education	\$14.4
Highway/Transportation	\$4.4
Public Welfare	\$5.3
Public Health & Safety	\$6.7
Natural Resources	\$1.3
General Administration & Interest	\$2.4
Other Miscellaneous	\$2.9
Total Expenditures:	\$37.5
Total Net Revenue:	\$38.1

Source: Georgia Tech Enterprise Innovation Institute using a Fiscal Impact Model for the State of Georgia.
 Totals may not add due to rounding.

Concluding Remarks

The economic and fiscal impacts associated with Children’s are significant. In order to understand just how significant, they need to be put into context, and there are two approaches to establish this context. First, the level of employment and payroll at Children’s can be compared to other private Georgia firms (See Table 5). In 2014, Children’s ranked 15th in the state with respect to employment and 20th with respect to total wages³.

Table 5
Top Private Employers Ranked by Level of Employment and Wages – 2014

EMPLOYMENT		WAGES	
RANK	EMPLOYER INDUSTRY TYPE	RANK	EMPLOYER INDUSTRY TYPE
1	Retail 1	1	Transportation
2	Transportation	2	Retail 1
3	Retail 2	3	Education
4	Retail 3	4	Food Products Manufacturing
5	Retail 4	5	Telecommunications
6	Healthcare 1	6	Broadcasting
7	Healthcare 2	7	Aerospace Manufacturing 1
8	Textile Manufacturing	8	Healthcare 1
9	Education	9	Healthcare 2
10	Healthcare 3	10	Healthcare 3
11	Retail 5	11	Financial Services
12	Courier services	12	Retail 2
13	Aerospace Manufacturing	13	Aerospace Manufacturing 2
14	Telecommunications	14	Utility
15	Children’s Healthcare	15	Textile Manufacturing
		16	Business Services
		17	Retail 3
		18	Electronics Manufacturing
		19	Retail 4
		20	Children’s Healthcare

³ The names, employment, and wages of the comparison firms are suppressed because of confidentiality requirements associated with the data source which is the 2014 ES202 quarterly firm-level data for the 3rd quarter.

Second, the economic impact of Children's can be compared to the largest recent economic development project to occur in Georgia — the location of the Caterpillar manufacturing plant near Athens. Based on the economic impact of the Caterpillar plant as calculated by the University of Georgia and reported in the *Atlanta-Journal Constitution*⁴, the total new economic output in Georgia from Children's is larger than that of Caterpillar (which will export nearly all of its output) and the total employment impact of Children's is more than 2.5 times that of Caterpillar — which is even more impressive given that the average wage of a Children's employee is 73 percent higher than the anticipated average wage of the workers at the Caterpillar plant.

As Children's continues to grow, so will their impact on the Georgia economy. Because the healthcare ecosystem in Georgia continues to expand and diversify, the economic multipliers will continue to grow as there will be more opportunities to spend healthcare resources in the state. For example, the economic output multipliers in the 2009 report were 1.76 meaning that for every \$1 of operating income generated by Children's, another 76 cents of economic output was created in the economy. As presented in Section 2, that multiplier has now increased to 2.05. Similarly, as Children's adds employees, their fiscal presence and impact will continue to grow due to their relatively high wages.

⁴ <http://www.ajc.com/news/business/landing-caterpillar-plant-a-major-economic-victory/nQRQ3/>