

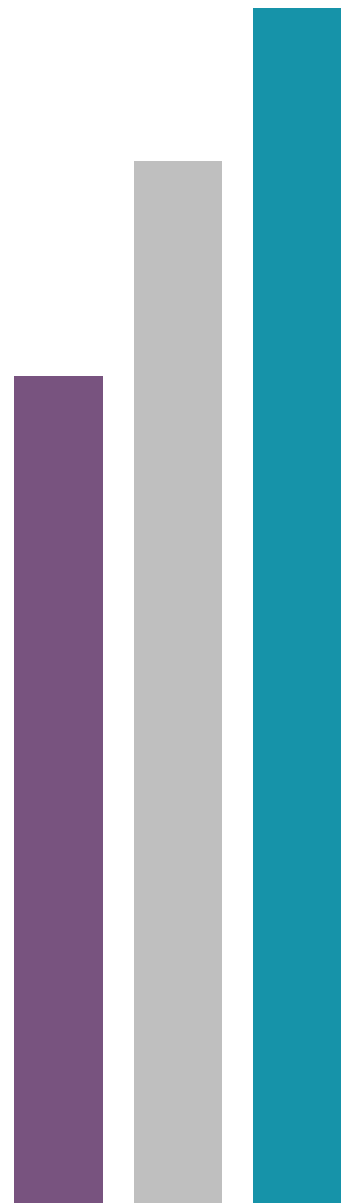
# The Impact of Franklin County Hospitals on the Columbus MSA Economy: An Update

Bill LaFayette, Ph.D.  
Owner, Regionomics® LLC

November 23, 2022



4926 Crestbrook Drive, Lockbourne, OH 43137  
[www.regionomicsllc.com](http://www.regionomicsllc.com)



## THE IMPACT OF FRANKLIN COUNTY HOSPITALS ON THE COLUMBUS MSA ECONOMY: AN UPDATE

Bill LaFayette, Ph.D.  
Owner, Regionomics® LLC  
November 23, 2022

### Summary of Key Findings

Franklin County hospitals directly contributed \$8.6 billion in 2019 and \$9.2 billion in 2021 to the economy of the 10-county Columbus Metropolitan Statistical Area (MSA) economy.

Including the hospitals' purchases from local suppliers and hospital and supplier employees' purchases of household goods and services from their wages, the total annual impact on the regional economy was \$18.0 billion in 2019 and \$19.3 billion in 2021.

The total impacts included earnings received by local households and businesses. These totaled \$5.07 billion in 2019 and \$5.59 billion in 2021. Full-time and part-time employment sustained throughout the region by hospital activities totaled 121,400 in 2019 and 126,900 in 2021.

The hospitals' contribution to gross domestic product (GDP) is measured not by output but by a more restrictive measure of activity called value added. The hospitals' total value added was \$10.4 billion in 2019 and \$11.2 billion in 2021 – roughly 8% of total Columbus MSA GDP.

In 2021, Franklin County hospitals provided \$139.8 million in charity care to patients who otherwise could not afford it. Charity care fills an important role by improving quality of life, improving worker productivity (and hence the local economy), and saving lives.

The hospitals attracted 53,300 patients from outside the MSA in 2019 and 51,200 in 2021, 22% of all inpatients in each year. These patients came from all 88 counties of Ohio, 49 states and the District of Columbia (all 50 states in 2019), Puerto Rico and the U.S. Virgin Islands, and from outside the U.S. These patients in turn attracted family and friends as visitors. The spending of these visitors generated an impact of \$73.2 million in 2019 and \$69.9 million in 2021.

**The combined output impact of hospital operations, construction, and visitor spending totaled \$18.1 billion in 2019 and \$19.4 billion in 2021. Columbus MSA earnings increased \$5.41 billion in 2019 and \$5.60 billion in 2021. These activities sustained 123,100 jobs in 2019 and 127,700 jobs in 2021. Hospitals' contribution to regional GDP totaled \$10.5 billion in 2019 and \$11.2 billion in 2021. Sustained jobs in 2021 represented 11.6% of total MSA payroll employment. The GDP contribution was around 8% of the regional total.**

Hospitals promote healthy living and medical knowledge through community education and outreach. This has never been more vital than during the COVID-19 pandemic. Professional education and training ensures that medical professionals in the region are equipped with the latest medical knowledge. It also provides a pipeline of new talent. The availability of top-notch medical care in Franklin County elevates the profile and desirability of the community, aiding in the attraction of new residents and businesses.

## Introduction

This study is an update of a 2014 analysis by Regionomics® of the impact of Franklin County hospitals on the economy of the 10-county Columbus Metropolitan Statistical Area (MSA). The focus is again the hospitals in Franklin County operated by the four systems, Mount Carmel Health System, Nationwide Children’s Hospital, OhioHealth, and The Ohio State University Wexner Medical Center. Economic impacts are measured for 2019, the year before the COVID-19 pandemic, and 2021.

The earlier study found that during 2013, Franklin County hospitals made a direct net contribution of \$6.58 billion in today’s dollars to the MSA’s total output. This included an inflation-adjusted \$257.2 million in charity care provided free of charge to individuals who could not otherwise afford care. The hospitals’ impact now is much larger. The hospitals’ direct output totaled \$8.15 billion in 2019 and increased to \$8.58 billion in 2021. The value of charity care was \$162.0 million in 2019 and \$139.8 million in 2021. Hospital construction – not included in the 2014 study – totaled \$455 million in 2019 and \$657 million in 2021.

Purchases from suppliers and the spending of wages and salaries by hospital and supplier employees added a further \$9.4 billion in output in 2019 and \$10.1 billion in 2021. Construction contributed supplier and household impacts of \$476.9 million in 2019 and \$691.7 million in 2021. Similar supplier and household impacts magnified earnings to a total impact of \$5.0 billion in 2019 and \$5.6 billion in 2021. The overall contribution to the MSA’s gross domestic product (GDP) totaled \$10.4 billion in 2019 and \$11.2 billion in 2021 – roughly 7.5% of total regional GDP.

The economic activity of the hospitals, construction companies, suppliers, and households also sustained 121,400 jobs in the regional economy in 2019 and 126,900 jobs in 2021. It is important to note that without the hospitals’ operation this other economic activity would not have occurred, so it is as much a part of the total economic impact as are the impacts of the hospitals themselves.

The level of care that these hospitals offer attract inpatients from outside of the MSA – 53,400 in 2019 and 51,400 in 2021, 22% of each year’s total. These patients not only bring their own spending on medical services into the region, but they also bring family and friends who come to visit the patient and spend money on goods and services while in the area. The total impact of this spending is difficult to estimate, but the impacts are roughly \$73.2 million in additional output in 2019 and \$69.9 million in 2021. The implied addition to regional earnings was \$21.8 million in 2019 and \$20.8 million in 2021. Around 800 jobs were sustained in each year.<sup>1</sup> Combining these visitor impacts with the care-related impacts produces total output impacts on the Columbus MSA economy of

Franklin County hospitals offer a variety of benefits that cannot be easily quantified. These include promoting wellness and healthy living through community outreach and education – including aggressive outreach and education regarding COVID-19 vaccines. They sustain the growth of the number of healthcare professionals through clinical training and continuing education. The local availability of cutting-edge healthcare improves quality of life of those whom the hospitals treat and reduce absences from the workforce. None of these benefits can be easily quantified, but that does not make them any less real.

---

<sup>1</sup> Visitor impacts are calculated using a different approach from that used in the 2014 study.

## The Concept of Economic Impact

The purpose of this study is to measure the impact of the hospitals operated by Mount Carmel Health System, Nationwide Children's Hospital, OhioHealth, and The Ohio State University Wexner Medical Center. The point of an economic impact study such as this is to measure the increase in output (production and spending) of a geographical area's economy resulting from a specific economic activity – in this case, the operation of hospitals. These impacts also include construction activity and the spending of family and friends from outside of the region. This spending brings dollars into the region, increasing the MSA's economic activity, income, and employment. The geographical area in this study is the ten-county Columbus Metropolitan Statistical Area (MSA)<sup>2</sup>. Even though the study considers only hospitals in Franklin County, the MSA is the appropriate area of analysis. MSAs reflect worker commuting patterns, so the Columbus MSA is the area from which the largest number of the hospitals' workers commute and where they spend their income on goods and services.

The production of output requires labor, thereby generating earnings to business owners and workers. The economic impact assessment also estimates both these earnings and the jobs that are created or sustained by the target activity. A final component of economic impact is value added, which is output less intermediate supplier inputs. Although supplier inputs contribute to output, earnings, and economic well-being, they are not counted in gross domestic product (GDP). So, value added is a measure of the increase in regional GDP due to these activities.

The output of the hospitals, earnings of workers, and hospital employment constitute the **direct** impact of the activity. But direct impacts are only part of the total impact. Local suppliers of goods and services to the hospitals generate output by providing those goods and services. They increase their own purchases of supplies to accommodate the increased activity. Supplier employment may increase as well. These supplier activities are referred to as **indirect** impacts. In addition, business owners earn profits, and their employees earn salaries, wages, and tips. These workers use their earnings to purchase household goods and services of all kinds. To the extent that these purchases are made to merchants within the Columbus MSA, the region's economic activity and output is increased further. This household spending is referred to as an **induced** impact. It is important to emphasize that the direct activities cause the indirect and induced spending. It would never have occurred had the operation of the hospitals not generated economic activity in the first place. For this reason, the indirect and induced impacts are as much a part of the total economic impact as are the direct impacts. This is the essential point that makes economic impact analysis legitimate.

These impacts are specific both to a given industry and to a given region. The array of suppliers that benefit from the spending of a hospital is generally the same regardless of where the hospital is located. But if the structure of the local economy is such that the hospital is forced to make most of its purchases from vendors outside the region, then most of the impact will leak from the economy. Conversely, a broad economy with many local suppliers, such as that of the Columbus MSA, will keep more of the impact of the output increase circulating within the economy, and the indirect and induced impacts will be greater. Thus, the values within the input-output table are unique to the geographical area as well as to the industry.

This study uses 2018 RIMS II data from the U.S. Bureau of Economic Analysis. These data consist of unique impact factors (multipliers) for each of 372 detailed industries and 64 aggregated industries

---

<sup>2</sup> Delaware, Fairfield, Franklin, Hocking, Licking, Madison, Morrow, Perry, Pickaway, and Union Counties.

within the Columbus MSA. The multipliers implicitly reflect the structure of the region's economy and the presence or absence of local suppliers. However, it is important to keep in mind that the results of this (or any) economic impact study represent only a rough estimate of the unobservable actual impacts.

A final point is the meaning of employment estimates. Employment is measured as headcount, the sum of full-time and part-time employment. The implication of the employment impact results is that additional work exists to provide employment for the calculated number of full-time and part-time positions. The model cannot determine how much of the indirect and induced employment is filled by new headcount, and how much by increased hours on the part of existing workers. For this reason, it is appropriate to call these jobs "sustained" and not "created."

### **Estimating the Economic Impacts of Franklin County Hospitals**

A key consideration in estimating the economic impact of Franklin County's hospitals is that payments by Columbus MSA residents for hospital services generally do not create an economic impact. The only impacts are created from outside dollars coming into the economy. This is because local patients' hospital payments are generally made with funds that would otherwise be spent on other goods and services within the area. Thus, the payments increasing the output of hospitals result in corresponding decreases in the output of other local goods and services. These payments constitute a shifting of economic activity rather than an increase in activity, so the net impact on the regional economy is zero, or nearly so.

One exception to this general rule arises from the fact that an array of state-of-the-art medical services are available in Franklin County. If all Franklin County hospitals were community hospitals, most patients could be treated, but patients with complex conditions would be required to travel to Cleveland, Cincinnati, or elsewhere to access the services that they need. The payments of these patients would thus leak out of the Central Ohio economy, but this leakage is prevented by the quality of local hospitals. Dollars that are prevented from leaving have the same effect as dollars that are brought in. This is called a **blockage impact**. There is no way to estimate this impact, so it is assumed that 10% of local patients' payments are blocked.

Unlike other types of local services, though, local residents' purchase of healthcare services does have an impact to the extent that the expenditures are covered by public and private insurance. Because the patient does not have to divert spending from other purchases to cover the insured portion of the hospital bill and because insurance payments come into the region from outside, they represent new flows of funds into the local economy and thus increase output.<sup>3</sup> Hospital revenues creating an impact are thus total revenues from patients living outside the MSA plus the insured expenses of local patients plus the blockage impact.

This line of reasoning leads to an important point. As insurance reimbursements decline and required copays increase, more spending of local households will be shifted from other goods and services to hospital spending and the impact of a dollar of hospital activity on the regional economy will decrease.

---

<sup>3</sup> This is true even if the payments are made by a locally based insurer. Because most of the funds used to pay those claims come from insured parties outside the MSA, they can be treated as dollars newly released into the local economy.

Another aspect of hospital operations is charity care. This provides a vital community service for those who cannot otherwise afford hospital costs. In contrast to many other communities, those needing charity care in Franklin County are not forced to turn to a separate charity hospital. They are welcomed into the same hospitals as the rest of the community. Individuals needing charity care include the working poor, for many of whom incapacitation would mean a total loss of income and a loss of production by their employer. Charity care preserves this income and its associated economic activity, improves the quality of life for these individuals, and saves lives that would otherwise be lost. As stated earlier, Franklin County hospitals provided \$162 million in charity care in 2019 and \$139.7 million in 2021. This is part of the region’s output and leads to the purchase of supplies and the payment of wages and salaries; consequently, charity care also generates indirect and induced impacts.

Construction activities also generate economic impacts, but these impacts are different from those of operations. While the impact of operations continues indefinitely, construction impacts last only while the construction lasts (although routine construction is likely fairly stable). For that reason, construction impacts are reported separately.

Each hospital system provided its total patient count, inpatient days, and payments by Medicare and Medicaid, private insurance, out-of-pocket payments, the value of charity care, construction spending, headcount, and employee pay. These are listed in Table 1.

**Table 1: Hospital Revenue, Construction Spending, and Employment**

	2019	2021
<b>Compensated care</b>		
Medicaid	\$ 240,331,307	\$ 348,180,978
Medicaid Managed Care	1,183,867,879	1,333,149,005
Private insurance	4,445,045,043	4,452,845,969
Medicare	1,213,149,229	1,129,681,928
Medicare Managed Care	793,748,745	1,028,678,145
Self-pay	23,716,738	24,675,377
Other	91,296,148	120,498,534
<b>Total compensated revenue</b>	<b>\$ 7,991,155,090</b>	<b>\$ 8,437,709,936</b>
Charity care	240,331,307	139,778,588
<b>Total value of care</b>	<b>\$ 8,153,124,214</b>	<b>\$ 8,577,488,524</b>
<b>Construction</b>		
Routine	114,109,828	136,629,788
Major	340,836,482	520,563,002
<b>Total construction</b>	<b>454,946,309</b>	<b>657,192,789</b>
<b>Total hospital activities</b>	<b>\$ 8,608,070,523</b>	<b>\$ 9,234,681,313</b>
Average headcount	48,620	49,325
Payroll	\$ 2,533,091,391	\$ 2,726,097,454
Average pay	\$ 52,100	\$ 55,268

Patient residence was given in total for all the hospitals. The distribution of patients by residence is given in Table 2. Franklin County hospitals drew patients from all 88 Ohio counties, all 50 states in 2019, 49 of the 50 states in 2021, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and outside the U.S.

**Table 2: Origin of Patients Treated at Franklin County Hospitals, 2019 and 2021**

Origin	2019		2021	
	Number	Percent	Number	Percent
Within Columbus MSA	190,203	78.1%	179,470	77.8%
Outside Columbus MSA, within Ohio	48,853	20.1%	47,256	20.5%
Other states, DC, and U.S. territories	4,406	1.8%	3,917	1.7%
Foreign countries	60	0.0%	68	0.0%
<b>Total identified</b>	<b>243,522</b>	<b>100.0%</b>	<b>230,711</b>	<b>100.0%</b>
Unidentified	123	---	127	---
<b>Total</b>	<b>243,645</b>	<b>---</b>	<b>230,838</b>	<b>---</b>

Because the allocation of payments between local and non-local patients is not available, it is assumed that the share of payments by category and in total is equal between the two groups. This implicitly assumes that local and non-local patients spend the same length of time in the hospital. In fact, the patients traveling from further distances may be sicker initially and thus may be hospitalized longer. If this is true, assuming the contrary causes the non-local share to be somewhat underestimated, and thus all the impacts to be underestimated as well. However, this has the advantage of making the impact estimates conservative.

Table 3 shows the allocation of the payments above between local and non-local patients and the amounts that are used in deriving the economic impact. Note that outside pay (public and private insurance) and out-of-pocket amounts of non-local patients are both carried over in full to the direct impact, as is the outside pay amount of patients from within the MSA. Charity care is also fully reflected in the impact: there is no spending to be displaced. However, only 10% of the out-of-pocket payments of local patients is carried over, which is the blockage impact. The remainder is assumed to be displaced from other local spending and have no net impact.

**Table 3: Local/Non-Local Allocation of Payments and Amounts Used in Impact Calculations**

	Compensated care			Direct impact		
	Within MSA	Outside MSA	Total	Within MSA	Outside MSA	Total
<b>2019</b>						
Outside pay	6,392,277,480	1,575,160,871	7,967,438,352	6,392,277,480	1,575,160,871	7,967,438,352
Self-pay	19,027,944	4,688,794	23,716,738	1,902,794	4,688,794	6,591,588
Charity care	161,969,124	0	161,969,124	161,969,124	0	161,969,124
<b>Total</b>	<b>6,573,274,548</b>	<b>1,579,849,665</b>	<b>8,153,124,214</b>	<b>6,556,149,399</b>	<b>1,579,849,665</b>	<b>8,135,999,064</b>
<b>2021</b>						
Outside pay	6,749,779,412	1,663,255,147	8,413,034,559	6,749,779,412	1,663,255,147	8,413,034,559
Self-pay	19,797,060	4,878,317	24,675,377	1,979,706	4,878,317	6,858,023
Charity care	139,778,588	0	139,778,588	139,778,588	0	139,778,588
<b>Total</b>	<b>6,909,355,060</b>	<b>1,668,133,464</b>	<b>8,577,488,524</b>	<b>6,891,537,706</b>	<b>1,668,133,464</b>	<b>8,559,671,170</b>

Table 4 details the impacts of Franklin County hospitals on the Columbus MSA economy during 2019 and 2021. The hospitals contributed \$19.3 billion in output to the economy in 2021, including \$4.2 billion in supplier impacts in 2021 and \$5.9 billion in household impacts. Earnings impacts during 2021 totaled \$5.6 billion, and 127,000 jobs were sustained in the region. The direct employment and earnings impacts are slightly less than the corresponding actual total headcount and payroll totals in Table 2 because of displacement effects. Not all revenues contribute to direct output; similarly, a small share of earnings and employment is offset by the loss of earnings and employment elsewhere.

**Table 4: Impact of Franklin County Hospitals on the Columbus MSA Economy, 2019 and 2021**

	Direct	Indirect	Induced	Total
<b>2019</b>				
<b>Output (\$000)</b>				
Total hospital activity	\$ 8,135,999	\$ 3,698,625	\$ 5,244,465	\$ 17,079,089
Routine construction	114,110	57,603	53,609	225,321
Major construction	340,836	133,369	232,348	706,554
<b>Total output impact (\$000)</b>	<b>\$ 8,590,945</b>	<b>\$ 3,889,597</b>	<b>\$ 5,530,422</b>	<b>\$ 18,010,965</b>
<b>Earnings (\$000)</b>				
Total hospital activity	\$ 2,526,492	\$ 964,615	\$ 1,259,204	\$ 4,750,310
Routine construction	28,503	15,737	15,964	60,204
Major construction	156,221	35,500	69,122	260,842
<b>Total earnings impact (\$000)</b>	<b>\$ 2,711,216</b>	<b>\$ 1,015,851</b>	<b>\$ 1,344,289</b>	<b>\$ 5,071,357</b>
<b>Value added (\$000)</b>				
Total hospital activity	---	---	---	9,928,360
Routine construction	---	---	---	112,569
Major construction	---	---	---	397,518
<b>Total value added impact (\$000)</b>	<b>---</b>	<b>---</b>	<b>---</b>	<b>10,438,447</b>
<b>Employment</b>				
Total hospital activity	48,136	25,575	41,195	114,906
Routine construction	489	342	451	1,281
Major construction	2,573	671	1,953	5,197
<b>Total employment impact</b>	<b>51,198</b>	<b>26,588</b>	<b>43,599</b>	<b>121,384</b>
<b>2021</b>				
<b>Output (\$000)</b>				
Total hospital activity	\$ 8,559,671	\$ 3,891,227	\$ 5,517,564	\$ 17,968,462
Routine construction	136,630	68,971	64,189	269,789
Major construction	520,563	203,696	354,868	1,079,127
<b>Total output impact (\$000)</b>	<b>\$ 9,216,864</b>	<b>\$ 4,163,894</b>	<b>\$ 5,936,621</b>	<b>\$ 19,317,378</b>
<b>Earnings (\$000)</b>				
Total hospital activity	\$ 2,719,068	\$ 1,038,140	\$ 1,355,183	\$ 5,112,391
Routine construction	34,128	18,843	19,115	72,086
Major construction	238,598	54,219	105,570	398,387
<b>Total earnings impact (\$000)</b>	<b>\$ 2,991,794</b>	<b>\$ 1,111,202</b>	<b>\$ 1,479,868</b>	<b>\$ 5,582,864</b>
<b>Value added (\$000)</b>				
Total hospital activity	---	---	---	\$ 10,445,367
Routine construction	---	---	---	134,785
Major construction	---	---	---	607,133
<b>Total value added impact (\$000)</b>	<b>---</b>	<b>---</b>	<b>---</b>	<b>\$ 11,187,285</b>
<b>Employment</b>				
Total hospital activity	49,198	26,139	42,103	117,440
Routine construction	585	409	540	1,534
Major construction	3,930	1,025	2,983	7,938
<b>Total</b>	<b>53,713</b>	<b>27,573</b>	<b>45,626</b>	<b>126,911</b>

Note: Components may not add to totals because of rounding.



As discussed earlier, value added measures the contribution of the subject activity to regional GDP. As reported in Table 3, this is \$10.4 billion in 2019 and \$11.2 billion in 2021. Total GDP in the Columbus MSA in 2020, the most recent year available, was \$137.26 billion. The value added estimate implies that the activity of Franklin County hospitals contributed roughly 8% of total regional GDP.

### Visitor Impacts

An often-overlooked economic impact of major hospitals such as those in Franklin County is the incidental spending of those coming from outside the area to visit patients. These impacts can be substantial. Visitors may purchase restaurant meals, gifts for the hospitalized individual, other goods and services for themselves, and overnight lodging. Like the spending of tourists, all of these purchases create impacts on regional output, earnings, and employment.

There is no direct information on the amount of visitor spending by friends and family of hospital patients, but an impact study from Tourism Economics for Tourism Ohio provided total spending by category of visitors to Ohio in 2020. These data were transformed into averages per visitor, which are in Table 5.

**Table 5: Average Expenditures of Visitors to Ohio**

Category	Overnight	Overnight per day	Day
Retail	\$ 53	\$ 28	\$ 25
Food and beverage	57	30	27
Gasoline	55	29	26
Banking	12	6	5
Recreation and entertainment	37	20	17
Other transportation	23	12	11
Lodging	106	57	0
<b>Total sales</b>	<b>\$ 343</b>	<b>\$ 183</b>	<b>\$ 110</b>

It is assumed that visitors are from the same location as the patient: local patients have no out-of-town visitors and out-of-town patients have no local visitors. None of the hospital systems had a current estimate of the number of visitors per patient, but for a 2007 impact study by the author, Nationwide Children’s indicated that out-of-town patients had on average 2.5 visitors. Because children may have more visitors than adults and to be conservative, two visitors on average are assumed on each day that the patient is in the hospital. Data from the Organisation for Economic Co-operation and Development include average length of hospital stay for inpatients in 34 member nations indicate that U.S. hospital patients in 2019 were hospitalized for an average of 5.4 days.<sup>4</sup>

As is the case for patient expenditures for medical services, residents within the MSA spend dollars visiting patients that they would likely have spent within the region in any case. Thus, the expenditures of these local visitors provide no incremental economic impact. Somewhat arbitrarily, it is assumed that all visitors living in 11 counties surrounding the MSA<sup>5</sup> (roughly 75 miles from downtown Columbus at

<sup>4</sup> Organisation for Economic Co-operation and Development. (2022). Length of hospital stay. <https://data.oecd.org/healthcare/length-of-hospital-stay.htm>. The usefulness of the comparison among nations is limited because it mixes pre-pandemic and pandemic-era data.

<sup>5</sup> Champaign, Clark, Coshocton, Fayette, Greene, Hardin, Knox, Logan, Marion, Muskingum, and Ross.

most) come in for a relatively short visit and return home. The spending of these visitors is assumed to be half the daily average.

Visitors of patients living outside this ring of counties, but within a day’s drive, spend the full day trip total. A day’s drive is defined as all of Indiana, Kentucky, and West Virginia, southern Michigan (three-digit ZIP codes 480-495), western New York (ZIP codes 140-147), and western Pennsylvania (ZIP codes 150-168). Table 6 reallocates the data in Table 2 to show the shares of local, day-trip, and overnight visitors. Consistent with the treatment of MSA patients, 10% of expenditures of the visitors of local patients is included as a blockage.

**Table 6: Allocation of Visitors of Patients of Franklin County Hospitals**

Origin	2019		2021	
	Number	Percent	Number	Percent
Within Columbus MSA	190,203	78.1%	179,470	77.8%
Outside Columbus MSA, nearby counties	19,552	8.0%	18,851	8.2%
Remainder of day-trip visitors	32,121	13.2%	30,884	13.4%
Overnight visitors	1,646	0.7%	1,506	0.7%
<b>Total identified</b>	<b>243,522</b>	<b>100.0%</b>	<b>230,711</b>	<b>100.0%</b>

One modification needs to be made to the purchase amounts above. Goods impact regional output only to the extent that their price reflects activity within the region. The price of a good includes the margin of the manufacturer, the cost of transportation into the area, the wholesale margin, and the retail margin. Unless the manufacturer is local, only the retail and possibly the wholesale margin reflects activity within the area. Because of the high concentration of wholesale distribution in the Columbus MSA, both wholesale and retail margins are reflected in the output estimates, but the manufacturer margin and transportation cost are excluded. The RIMS II files include these margins; they are multiplied by the retail price to yield the relevant total. The combined wholesale and retail margin is 47.55% for general retail and 29.98% for gasoline; these percentages are multiplied by the expenditures to determine the direct output impact. Services (including hospital services) are valued at their full price because they are generally produced entirely in the location where they are consumed, and goods are a relatively minor share of the total cost of these services.

Table 7 on the next two pages summarizes the results of the calculations outlined above. The spending of friends and family visiting patients of Franklin County hospitals added nearly \$70 million to regional output in 2021 and sustained 781 direct, indirect, and induced jobs. Visitor activity increases regional GDP \$39.9 million.

**Table 7**  
**Economic Impact of Franklin County Hospital Visitors' Spending on the Columbus MSA**

	Direct	Indirect	Induced	Total
<b>2019</b>				
<b>Output</b>				
Retail	\$ 5,342,900	\$ 2,348,800	\$ 2,941,300	\$ 10,633,000
Food and beverage	12,050,900	6,039,900	6,388,200	24,479,000
Gasoline	3,483,800	1,676,000	1,962,400	7,122,200
Banking	2,457,200	747,700	947,000	4,151,800
Recreation and entertainment	7,886,600	3,427,500	4,057,600	15,371,700
Other transportation	4,906,400	2,094,500	2,613,600	9,614,600
Lodging	944,500	385,700	458,100	1,788,400
<b>Total output impact</b>	<b>\$ 37,072,300</b>	<b>\$ 16,720,200</b>	<b>\$ 19,368,200</b>	<b>\$ 73,160,700</b>
<b>Earnings</b>				
Retail	\$ 1,710,500	\$ 717,900	\$ 877,300	\$ 3,305,700
Food and beverage	3,555,600	1,717,900	1,905,200	7,178,700
Gasoline	1,166,500	452,800	583,900	2,203,100
Banking	541,300	240,100	281,800	1,063,200
Recreation and entertainment	2,378,200	971,200	1,209,800	4,559,200
Other transportation	1,571,900	586,000	780,100	2,938,000
Lodging	253,200	124,900	136,300	514,400
<b>Total earnings impact</b>	<b>\$ 11,177,100</b>	<b>\$ 4,810,700</b>	<b>\$ 5,774,500</b>	<b>\$ 21,762,300</b>
<b>Value added</b>				
Retail	---	---	---	\$ 6,525,900
Food and beverage	---	---	---	13,648,800
Gasoline	---	---	---	4,181,600
Banking	---	---	---	2,775,400
Recreation and entertainment	---	---	---	9,065,600
Other transportation	---	---	---	4,540,400
Lodging	---	---	---	1,068,900
<b>Total value added impact</b>	<b>---</b>	<b>---</b>	<b>---</b>	<b>\$ 41,806,600</b>
<b>Employment</b>				
Retail	74	15	24	113
Food and beverage	182	38	53	272
Gasoline	41	12	16	69
Banking	8	6	8	21
Recreation and entertainment	78	23	34	135
Other transportation	157	11	22	190
Lodging	10	3	4	17
<b>Total employment impact</b>	<b>550</b>	<b>107</b>	<b>161</b>	<b>818</b>

— Continued on next page —

**Table 7 (continued)**  
**Economic Impact of Franklin County Hospital Visitors' Spending on the Columbus MSA**

	Direct	Indirect	Induced	Total
<b>2021</b>				
<b>Output</b>				
Retail	\$ 5,109,400	\$ 2,246,100	\$ 2,812,700	\$ 10,168,200
Food and beverage	11,525,600	5,776,600	6,109,700	23,411,900
Gasoline	3,331,900	1,603,000	1,876,900	6,811,800
Banking	2,350,000	715,100	905,700	3,970,900
Recreation and entertainment	7,542,800	3,278,100	3,880,800	14,701,600
Other transportation	4,692,500	2,003,200	2,499,700	9,195,500
Lodging	864,200	352,900	419,100	1,636,300
<b>Total output impact</b>	<b>\$ 35,416,400</b>	<b>\$ 15,975,100</b>	<b>\$ 18,504,600</b>	<b>\$ 69,896,000</b>
<b>Earnings</b>				
Retail	\$ 1,635,700	\$ 686,500	\$ 839,000	\$ 3,161,200
Food and beverage	3,400,600	1,643,000	1,822,200	6,865,800
Gasoline	1,115,600	433,000	558,400	2,107,100
Banking	517,700	229,600	269,500	1,016,900
Recreation and entertainment	2,274,500	928,900	1,157,100	4,360,500
Other transportation	1,503,300	560,400	746,100	2,809,900
Lodging	231,700	114,300	124,700	470,600
<b>Total earnings impact</b>	<b>\$ 10,679,200</b>	<b>\$ 4,595,700</b>	<b>\$ 5,517,000</b>	<b>\$ 20,791,900</b>
<b>Value added</b>				
Retail	---	---	---	\$ 6,240,600
Food and beverage	---	---	---	13,053,800
Gasoline	---	---	---	3,999,300
Banking	---	---	---	2,654,400
Recreation and entertainment	---	---	---	8,670,400
Other transportation	---	---	---	4,342,500
Lodging	---	---	---	978,000
<b>Total value added impact</b>	<b>---</b>	<b>---</b>	<b>---</b>	<b>\$ 39,939,000</b>
<b>Employment</b>				
Retail	71	14	23	108
Food and beverage	174	36	51	260
Gasoline	39	11	16	66
Banking	8	5	8	21
Recreation and entertainment	75	22	32	129
Other transportation	150	11	21	182
Lodging	9	2	4	15
<b>Total employment impact</b>	<b>525</b>	<b>102</b>	<b>154</b>	<b>781</b>

Note: Components may not add to totals because of rounding.

Because these visits were prompted by hospital activities, the impacts that they generated are also part of the overall impact of Franklin County hospitals. Accordingly, Table 8 combines the hospital impacts in Table 4 and the visitor impacts in Table 7 to provide estimates of the total impact of Franklin County hospitals on the Columbus MSA.

**Table 8: Impact of Franklin County Hospitals on the Columbus MSA Economy, 2019 and 2021**

	Direct	Indirect	Induced	Total
<b>2019</b>				
<b>Output (\$000)</b>				
Hospital operations	\$ 8,135,999	\$ 3,698,625	\$ 5,244,465	\$ 17,079,089
Hospital construction	454,946	190,972	285,957	931,875
Visitor spending	37,072	16,720	19,368	73,161
<b>Total output impact (\$000)</b>	<b>\$ 8,628,018</b>	<b>\$ 3,906,317</b>	<b>\$ 5,549,790</b>	<b>\$ 18,084,125</b>
<b>Earnings (\$000)</b>				
Hospital operations	\$ 2,711,216	\$ 1,015,851	\$ 1,344,289	\$ 5,071,357
Hospital construction	184,724	51,237	85,086	321,047
Visitor spending	11,177	4,811	5,774	21,762
<b>Total earnings impact (\$000)</b>	<b>\$ 2,907,117</b>	<b>\$ 1,071,899</b>	<b>\$ 1,435,149</b>	<b>\$ 5,414,166</b>
<b>Value added (\$000)</b>				
Hospital operations	---	---	---	\$ 9,928,360
Hospital construction	---	---	---	510,087
Visitor spending	---	---	---	41,807
<b>Total value added impact (\$000)</b>	---	---	---	<b>\$ 10,480,253</b>
<b>Employment</b>				
Hospital operations	48,493	25,765	41,501	115,758
Hospital construction	3,062	1,013	2,404	6,478
Visitor spending	550	107	161	818
<b>Total employment impact</b>	<b>52,105</b>	<b>26,884</b>	<b>44,065</b>	<b>123,054</b>
<b>2021</b>				
<b>Output (\$000)</b>				
Hospital operations	\$ 8,559,671	\$ 3,891,227	\$ 5,517,564	\$ 17,968,462
Hospital construction	657,193	272,667	419,056	1,348,916
Visitor spending	35,416	15,975	18,505	69,896
<b>Total output impact (\$000)</b>	<b>\$ 9,252,280</b>	<b>\$ 4,179,869</b>	<b>\$ 5,955,125</b>	<b>\$ 19,387,274</b>
<b>Earnings (\$000)</b>				
Hospital operations	\$ 2,719,068	\$ 1,038,140	\$ 1,355,183	\$ 5,112,391
Hospital construction	272,726	73,062	124,685	470,473
Visitor spending	10,679	4,596	5,517	20,792
<b>Total earnings impact (\$000)</b>	<b>\$ 3,002,473</b>	<b>\$ 1,115,798</b>	<b>\$ 1,485,385</b>	<b>\$ 5,603,656</b>
<b>Value added (\$000)</b>				
Hospital operations	---	---	---	\$ 10,445,367
Hospital construction	---	---	---	741,918
Visitor spending	---	---	---	39,939
<b>Total value added impact (\$000)</b>	---	---	---	<b>\$ 11,227,224</b>
<b>Employment</b>				
Hospital operations	49,198	26,139	42,103	117,440
Hospital construction	4,515	1,434	3,522	9,471
Visitor spending	525	102	154	781
<b>Total</b>	<b>54,238</b>	<b>27,675</b>	<b>45,780</b>	<b>127,693</b>

Note: Components may not add to totals because of rounding.

## **Non-quantifiable Impacts on Franklin County and the Region**

Not all impacts of businesses and activities on their region can be reduced to dollars and cents. This is particularly true of entities such as Franklin County hospitals, which have a substantial impact on the health, well-being, and quality of life of residents of the region and beyond. In addition to patient care, one highly visible example of this impact is community outreach and education. All four systems offer community education programs and information that promote wellness and healthy behaviors, allowing members of the community to obtain knowledge that will improve their health and decrease the incidence of illness.

The value of these education and outreach programs has never been greater than during the COVID-19 pandemic. These included the mass vaccination sites organized by the hospitals and on-demand testing services. Importantly, outreach also included seminars and media appearances featuring the systems' top specialists, who provided and explained the profession's evolving understanding of the virus. These efforts doubtless helped dispel individuals' concerns over the vaccines and uncertainty regarding prevention guidelines. This increased vaccine uptake, reducing infection rates and likely saving lives.

Another aspect of education is that provided to medical students and professionals, including both professionals associated with the individual hospital system and those from elsewhere. All four systems offer clinical training for students completing their medical education and a variety of opportunities for continuing education for established professionals. These include seminars and conferences, continuing professional education programs (both live and online) and a variety of customized offerings. The outcome is more knowledgeable healthcare professionals, who bring this knowledge into their own practice.

The existence of the clinical student education program has significant implications for the region's workforce development. The ability of students to work in their field of study in the community – regardless of the industry – opens access to the Central Ohio economy and its relevant employment opportunities to these students. Those enjoying this access are more likely to develop the professional contacts that will encourage them to stay to take local jobs and develop their career in the region. Of course, it also sustains the hospitals' own talent pipeline.

Finally, the availability of top-notch medical care in Franklin County elevates the profile and desirability of the community. It is a strong selling point for both prospective residents considering moving to Columbus and to companies considering opening facilities in the region. None of these benefits can be quantified as easily as can those discussed earlier, but that does not make them any less real.