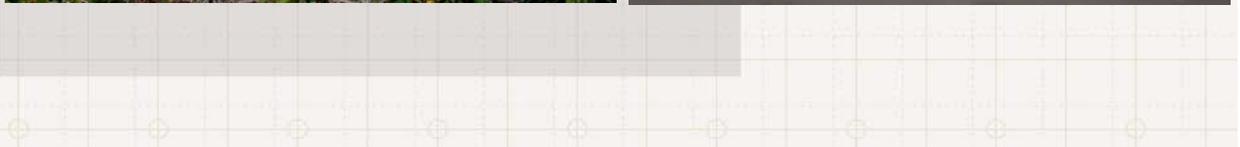




# Economic Contribution of Mercy and Unity Hospitals

A REPORT OF THE ECONOMIC IMPACT ANALYSIS PROGRAM

Authored by Brigid Tuck and Neil Linscheid





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December 2013

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**Partners/Sponsors:**

Anoka County  
City of Coon Rapids  
City of Fridley

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## Economic Contribution of Mercy and Unity Hospitals: Executive Summary

- *Background:* Mercy and Unity hospitals, located in the northern Twin Cities, trace their histories to the influx of suburban residents following World War II. Mercy and Unity hospitals serve residents of 25 north metro communities including Maple Grove, Osseo, Anoka, Coon Rapids, Blaine, Fridley, Hilltop, Mounds View, and Spring Lake Park. Both hospitals are owned and operated by Allina Health.
- *Direct Spending and Employment:* In 2012, Mercy and Unity hospitals employed 3,730 people. The two hospitals spent \$266.3 million on purchases within the eleven-county Twin Cities metropolitan area. The core of those expenditures (\$258.4 million) went for employee salaries, wages and benefits. In Anoka County, Mercy and Unity hospitals spent a total of \$141.8 million to provide patient care. The hospitals employed 1,960 Anoka County residents and paid \$139.8 million in salaries, wages, and benefits to those employees.
- *Economic Contribution of Operations in Anoka County:* Mercy and Unity hospitals generated an estimated \$220.6 million of economic activity in Anoka County in 2012. The hospitals supported an estimated 2,690 jobs which paid \$164.9 million in labor income to Anoka County residents. This contribution includes direct spending (detailed above) and increased spending at local business generated by the direct spending. Total output in Anoka County is \$20.3 billion. Thus, Mercy and Unity hospitals contribute about 1 percent of total output to the county economy.
- *Economic Contribution of Operations in Twin Cities Metro:* Mercy and Unity hospitals generated an estimated \$507.7 million of economic activity in the eleven-county Twin Cities metro region in 2012. The hospitals supported 4,990 jobs. Those jobs paid \$342.4 million in labor income to metro area residents.
- *Economic Contribution of Capital Investments:* Allina Health continues to invest in the future of the communities it serves. Between 2012 and 2014, the two hospitals intend to spend \$56.9 million to construct new facilities and remodel current buildings. As a result of these construction expenditures, Mercy and Unity hospitals will contribute an estimated \$84.2 million of additional economic activity to the economy of Anoka County and support 780 jobs.
- *Mercy and Unity - Beyond Economic Contributions:* Mercy and Unity hospitals contribute to their communities beyond their economic contribution. In 2012, Mercy and Unity hospitals contributed \$84.5 million in benefits to their communities. In addition, this study does not include the economic activity generated by independent physicians and specialists connected to the hospitals. The economic contribution of their expenditures is significant and not included in this analysis.

*Mercy and Unity hospitals, through expenditures for operations, contribute \$507.7 million in economic activity and support jobs for 4,990 people in the Twin Cities metro.*



## **BACKGROUND OF THE STUDY**

Mercy and Unity hospitals, located in the northern Twin Cities metro, both trace their histories to the influx of new suburban residents following World War II. As returning war veterans and their young families moved to the north of downtown Minneapolis and St. Paul, a need for medical services arose. In response, local communities collaborated to build two new hospitals.

Mercy Hospital was founded in 1963 by the Anoka Community Hospital Association. Volunteers launched a funding drive and two years later, Mercy Hospital began operations in Coon Rapids. The hospital has grown since then, but it continues to serve residents of 25 north metro communities including Maple Grove, Osseo, Anoka, Coon Rapids, Elk River, and Rogers.

In 2012, Mercy Hospital operated 271 licensed beds. The hospital recorded nearly 23,000 inpatient admissions and served approximately 136,000 outpatients. Mercy Hospital performed 14,900 surgeries, delivered 2,000 newborns, and served 58,700 emergency department patients.

Unity Hospital's roots trace back to the early 1960's, when the North Suburban Hospital District was formed. From those efforts, funds were raised to open a community hospital. In 1966, Unity Hospital opened its doors to patients. The North Suburban Hospital District continues to operate with five communities financially supporting Unity Hospital including Blaine, Fridley, Hilltop, Mounds View, and Spring Lake Park. Unity Hospital serves patients from across the north metro and beyond.

In 2012, Unity Hospital operated 275 licensed beds. The hospital served 12,500 patients as inpatients and 94,900 as outpatients. Unity Hospital performed 6,700 surgeries, delivered 1,200 newborns, and served 51,000 emergency department patients.

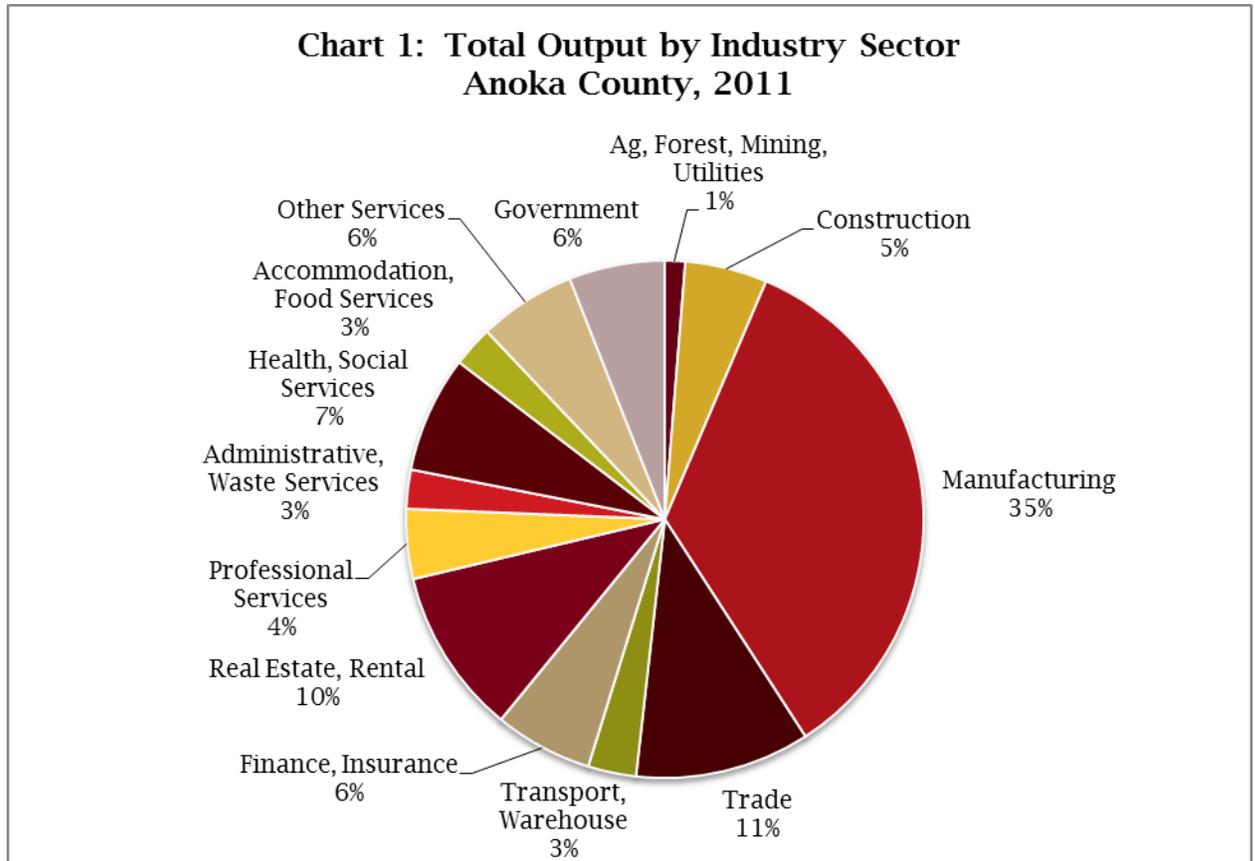
In 1970, Mercy and Unity hospitals joined Health Central which has since evolved into Allina Health. Under Allina Health, the hospitals strive together to continue to provide critical medical services to patients in the Twin Cities metro and in Minnesota.

Mercy and Unity hospitals seek to better understand the economic contribution of the hospitals on the surrounding community and region. To achieve this goal, Anoka County, with financial support from the City of Coon Rapids and the City of Fridley, contracted with University of Minnesota Extension to conduct an economic contribution study. The study has two deliverables including a written report and a facilitated presentation of the results.

## PROFILE OF THE STUDY AREA ECONOMY

The primary focus of this study is to examine the economic contribution of Mercy and Unity hospitals on the economy of Anoka County. Since the hospitals provide essential services to residents of the Twin Cities metropolitan area, this study will also consider the economic contribution to that region.

In 2011, Anoka County industries produced \$20.3 billion in sales (output)<sup>1</sup>. Anoka County's output comprised 6 percent of output in the 11-county Twin Cities metro. In Anoka County, manufacturing companies produced 35 percent of total output (chart 1). Hospitals are part of the health and social services industry. Private hospitals in Anoka County accounted for \$490 million in output.

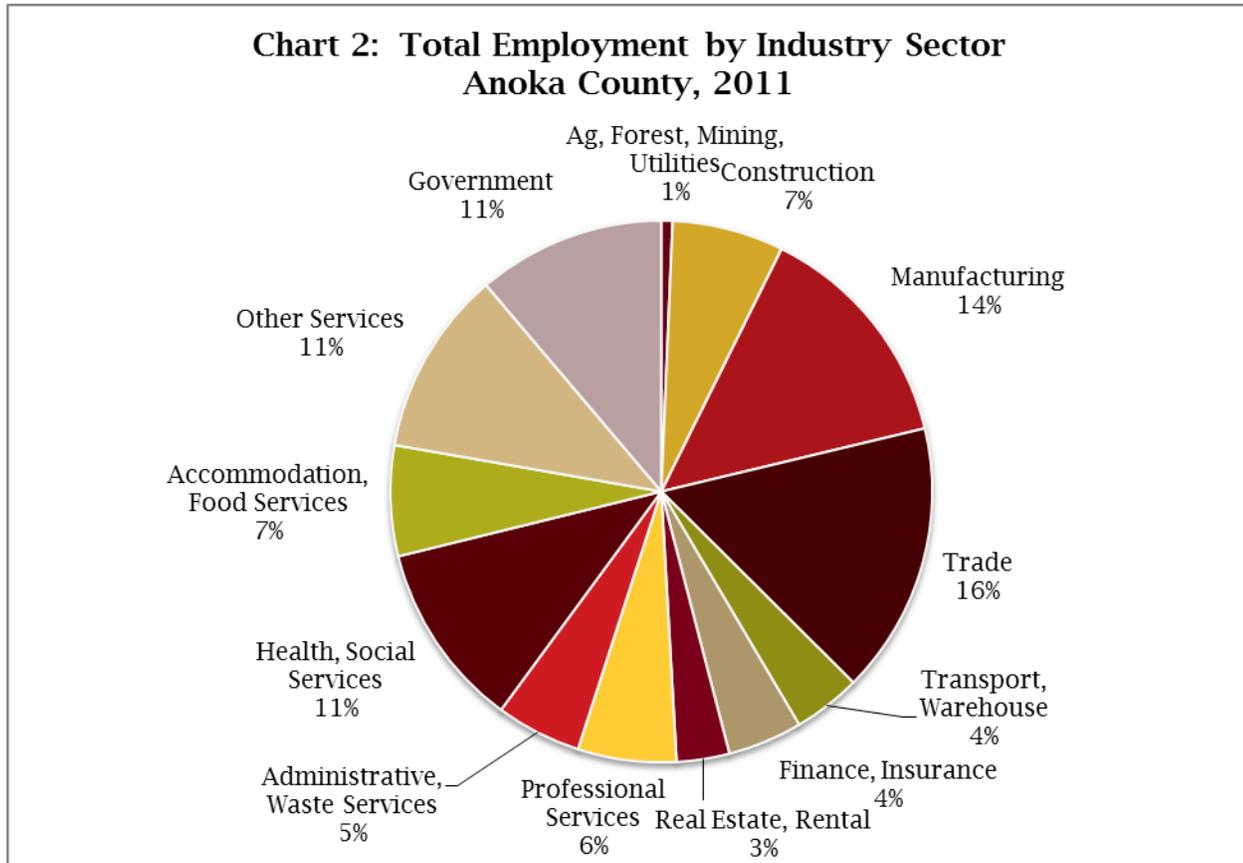


In 2011, industries in Anoka County employed 150,400 people. Sixteen percent of those jobs were in trade industries (including retail and wholesale trade), as shown in chart 2. Fourteen percent of those jobs were in the manufacturing industry and eleven percent in the government industry. Private hospitals located in Anoka County employed an estimated 3,500 workers in 2011.

Manufacturing accounts for a higher percent of total output as compared to employment. This is typical, as in the IMPLAN database one job is one job regardless if the job is full-time, part-time, or seasonal. Manufacturing tends to have more full-time employees while other industries (such as trade and services) have a higher number of part-time employees, skewing employment towards

<sup>1</sup> Data in this section of the report is from the IMPLAN database (MIG, Inc). Data from 2011 is the most current data available.

those industries. In addition, manufacturing tends to have a high level of productivity or output per worker.



## ECONOMIC CONTRIBUTION

### Direct Effect of Operations

The direct effect of Mercy and Unity hospitals is driven by expenditures for day-to-day operations. The hospitals make local expenditures for goods and services in order to care for patients. The hospitals also make expenditures to their employees, many of whom live in local communities. These local expenditures and payments for labor create the direct effect of Mercy and Unity hospitals. In addition, Mercy and Unity hospitals continue to make capital investments to support operations. These investments also generate impacts in the local economy. The impact of capital investments will be explored in another section of this report; here the focus will be on operations.

In order to quantify the direct effect of Mercy and Unity hospitals, the two hospitals provided to University of Minnesota Extension their operating expenditures for 2012 including total salaries, wages, and benefits paid. Extension was then able to estimate expenditures in two study areas - Anoka County and the eleven-county Twin Cities metropolitan area.

In 2012, Mercy and Unity hospitals spent \$544.7 million dollars to provide patient services (table 1). Approximately half of the expenditures (\$272.6 million) were for the supplies and services needed by hospitals. The other half of the expenditures (\$272.0 million) were to pay hospital employees' wages, salaries, and benefits.

	<b>Anoka County</b>	<b>Eleven-County Metro Region</b>	<b>Total</b>
Supplies and Services	\$1.9	\$7.8	\$272.6
Salaries, Wages, and Benefits	\$139.8	\$258.4	\$272.0
Taxes (Property)	\$0.09	\$0.09	\$0.09
Total Expenditures	\$ 141.8	\$ 266.3	\$ 544.7

Data supplied by Mercy and Unity hospitals and compiled by University of Minnesota Extension

### Mercy and Unity Expenditures for Supplies and Services

In 2012, Mercy and Unity hospitals spent \$1.9 million in Anoka County on the goods and services needed to provide patient care. In the eleven-county Twin Cities metro region, Mercy and Unity hospitals spent \$7.8 million on goods and services. The hospitals purchase a wide variety of goods and services locally. As would be expected, the hospitals expend a portion of their local spending on medical supplies and instruments. The Twin Cities has a competitive medical device industry, so local expenditures in this area are expected. The two hospitals also make expenditures for local items including construction and maintenance for the buildings, services for mechanical and electronic systems, housekeeping, and engineering and architecture services. It should be noted the two hospitals are owned and operated by Allina Health. As a result, both hospitals receive critical operational support from Allina Health's centralized corporate structure.

As detailed earlier, total output in Anoka County is \$20.3 billion. Therefore, Mercy and Unity hospitals directly contribute approximately 1 percent of total output to the county's economy.

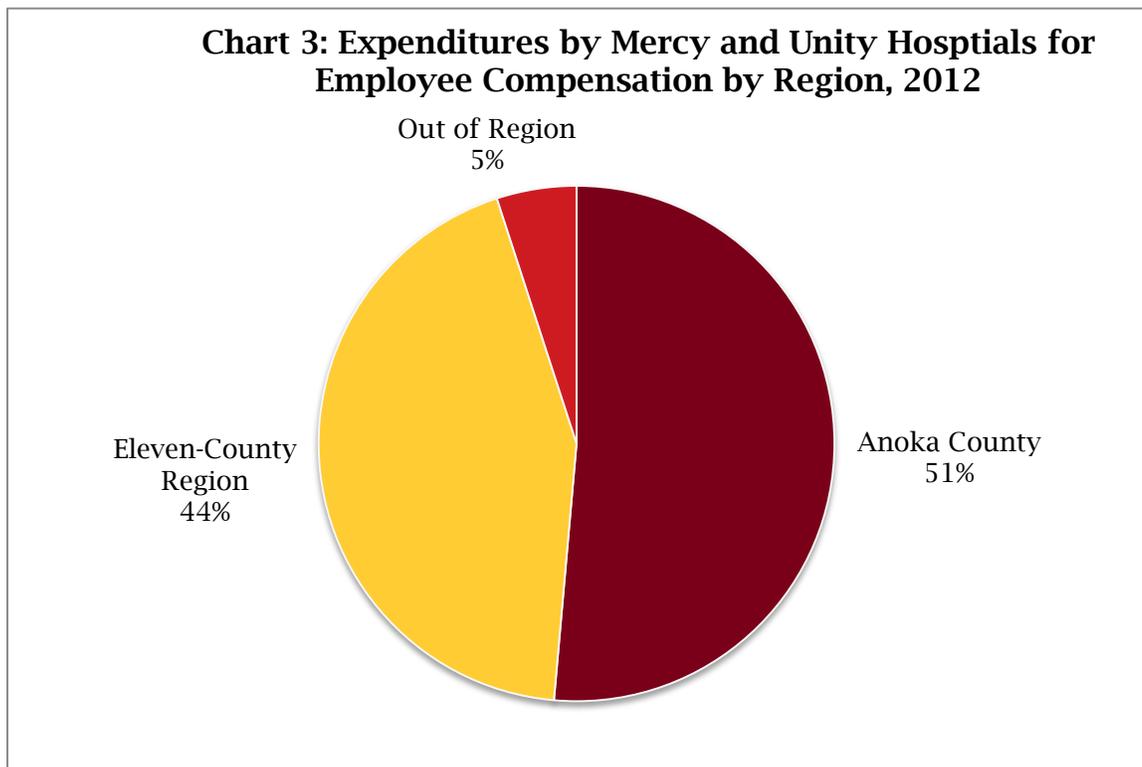
**Mercy and Unity Expenditures for Employee Compensation**

Mercy and Unity hospitals spent \$258.4 million in the *eleven-county metro* on employee salaries, wages, and benefits in 2012 (table 1). Of total expenditures for labor, over half (51 percent) went to employees whose residence is in Anoka County (chart 3).

In 2012, Mercy and Unity hospitals employed 3,733 individuals (table 2). Of Mercy and Unity employees, 52 percent (1,958) reside in Anoka County. The majority (3,224) reside in the eleven-county Twin Cities region.

<b>Table 2: Employment at Mercy and Unity Hospitals, 2012</b>			
	<b>Anoka County</b>	<b>Eleven-County Region</b>	<b>Total</b>
Total	1,958	3,224	3,733

As detailed earlier, there are 150,000 people employed in Anoka County. Mercy and Unity hospitals directly employ 2.5 percent of the total employment in the county. In this study, jobs are measured by the number of people working, regardless if the employment is part-time, full-time, or seasonal.



**Mercy and Unity Contributions to Minnesota Care Tax and Uncompensated Care**

Mercy and Unity Hospitals contributed \$7.0 million to the Minnesota Care Tax in 2012 (table 3). The Minnesota Care Tax is a state tax levied on healthcare providers whose health-related occupation is regulated by the state and who provide diagnostic, therapeutic, prescription drug, or medical services to a patient or consumer. The tax assists in funding the Minnesota Care program, a jointly funded federal-state program administered by the Minnesota Department of Human Services which provides subsidized health coverage for eligible Minnesotans. Payments for the Minnesota Care Tax are included in the economic impact and are quantified in the direct impact figures of table 1.

	<b>Minnesota Care Tax</b>	<b>Uncompensated Care</b>
Total (millions)	\$7.0	\$51.6

In addition, Mercy and Unity hospitals incurred \$51.6 million of costs associated with uncompensated care or care for which the hospitals did not receive payment. The costs of the patient services are also included in the direct impact (as the hospital purchased the supplies, services, and employee time to provide the care). Uncompensated care is a reduction to the revenue stream for the hospitals.

**Indirect and Induced Effects**

Now that the estimated direct effects are quantified, the data can be entered into an input-output model. Input-output models trace the flow of dollars throughout a local economy and can capture the indirect and induced, or ripple, effects of an economic activity. The input-output model IMPLAN was used in this analysis.

Indirect effects are those associated with a change in economic activity due to spending for goods and services directly tied to the industry. In this case, these are the changes in the local economy occurring because Mercy and Unity hospitals need to purchase supplies (medical supplies and medical equipment, for example) and related services (building maintenance and housekeeping, for example). As the hospitals make purchases, this creates an increase in purchases across the supply chain. Indirect effects are the summary of these changes across an economy.

Induced effects are those associated with a change in economic activity due to spending by the employees of businesses (labor) and by households. Primarily, in this study, these are economic changes related to spending by Mercy and Unity hospital employees. It also includes household spending related to indirect effects. As employees of the hospital make purchases locally, this triggers increases in purchases on that supply chain.

More information on direct, indirect, and induced effects is provided in appendix 1.

**Economic Contribution of Operations**

When Mercy and Unity hospitals make purchases in the study area, a ripple effect of spending begins, stimulating additional economic activity. In 2012, Mercy and Unity hospitals, through these ripples, contributed \$220.6 million dollars in economic activity to Anoka County (table 4). The hospitals’ presence in Anoka County supports 2,690 jobs. These employees receive \$164.9 million in wages, salaries and benefits. Since wages and salaries comprise the majority of Mercy and Unity hospitals’ spending in Anoka County, it is not surprising the majority of impact is created through consumer-to-business transactions (induced effect in table 4).

<b>Table 4: Total Economic Contribution of Mercy and Unity Hospitals' Operations on Anoka County, 2012</b>			
	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$141.8	1,960	\$139.8
Indirect	\$2.8	30	\$1.3
Induced	\$76.0	700	\$23.8
Total	\$ 220.6	2,690	\$ 164.9
University of Minnesota Extension			

In 2012, Mercy and Unity hospitals contributed \$507.7 million in economic activity to the economy of the eleven-county Twin Cities metropolitan area (table 5). Of this, \$342.4 million was as payments to labor. The hospitals supported an estimated 4,990 jobs in the metropolitan area.

<b>Table 5: Total Economic Contribution of Mercy and Unity Hospitals' Operations on the Eleven-County Metro, 2012</b>			
	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$266.3	3,220	\$258.4
Indirect	\$14.2	100	\$6.3
Induced	\$227.2	1,670	\$77.7
Total	\$ 507.7	4,990	\$ 342.4
University of Minnesota Extension			

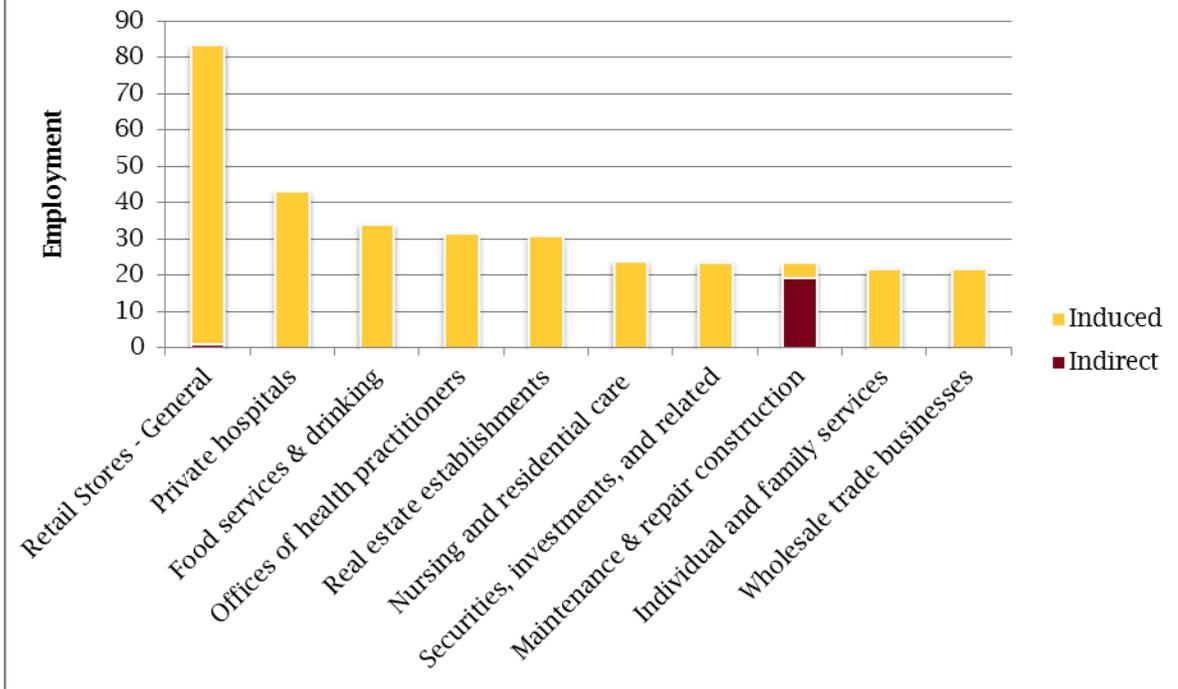
**Top Industries Impacted**

Mercy and Unity hospitals supported 2,690 jobs in Anoka County in 2012. The majority of those jobs (1,960) were directly created by the two hospitals. The additional jobs are in industries that provide goods and services to the hospitals and their employees. Chart 4 shows the industries with the highest number of employees attributable to Mercy and Unity’s activities. As discussed, induced impacts (consumer-to-business) comprise the majority of the additional economic activity generated. Therefore, it is not surprising to see industries that support consumers in the list. Further, in the model, one job is one job. Certain industries, such as food services and drinking places, tend to have higher rates of part-time employment than others and therefore show higher employment numbers. As shown in chart 4, maintenance and repair construction has a high level of indirect employment related to the hospitals. This is one of the key services the hospitals purchase locally.

Health care is one of a household’s largest expenditures. Mercy and Unity hospitals’ employees consume health care throughout their communities. Chart 4 reflects this as private hospitals, nursing and residential care, and offices of health care practitioners are shown.

In Anoka County, the ripple effects are highest in general retail stores, the private hospitals, and food services and drinking industries. Chart 4 does not include the direct effects of employment at the two hospitals.

**Chart 4: Top Industries Impacted by Mercy and Unity Hospital Operations for Anoka County: Induced and Indirect Impacts**



## Economic Contribution of Capital Investments

In addition to day-to-day operations, Mercy and Unity hospitals have made and plan to make significant investments in the future of the hospitals. Projects include 1) a recently completed data center, 2) a planned transitional care unit on the Unity campus in partnership with Benedictine Health System, 3) a new Mother Baby Center under construction on the Mercy campus, 4) a multi-purpose operating room on the Mercy campus, and 5) a remodel of the front entrance/receiver and gift/coffee shop at Mercy Hospital. This section of the report will detail the economic contribution of the combined projects. Analyses of the economic contribution of each individual capital improvement project are included in appendix three.

In total, Mercy and Unity hospitals will invest \$56.9 million in capital improvement projects from 2012 to 2014. According to the IMPLAN model used in this analysis, construction companies hired to complete the projects will need to employ an estimated 530 individuals and pay \$26.0 million in compensation to those workers (table 6).

As a result of the expenditures for capital improvements by Mercy and Unity hospitals, the hospitals will stimulate an estimated total of \$84.2 million in economic activity in the Anoka County economy. The capital improvement projects will support an estimated 780 jobs and \$35.1 million in labor income in the county. The impact of the capital improvement projects will only be sustained during the construction phase and will slowly dissipate once the projects are complete.

	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$56.9	530	\$26.0
Indirect	\$10.9	100	\$4.0
Induced	\$16.4	150	\$5.1
<b>Total</b>	<b>\$ 84.2</b>	<b>780</b>	<b>\$ 35.1</b>
University of Minnesota Extension			

Once the construction projects are complete, Mercy and Unity hospitals will hire additional staff and incur additional expenses to operate the expanded facilities. In particular, the hospitals plan to hire 22 new employees in the first year to staff the new Mother Baby Center. The hospitals also intend to hire 6 new employees to staff the new multi-purpose operating room. The IMPLAN model estimates that in Anoka County, the operations of these new facilities will result in an estimated \$3.6 million of direct economic output, including \$1.8 million in labor income payments (table 7).

As a result of the operations of the new facilities at Mercy and Unity hospitals, the hospitals will stimulate an estimated total of \$5.5 million of economic activity in Anoka County. The new operations will support 45 jobs which will pay \$2.3 million in labor income. These impacts will be reoccurring and continue as long as the new facilities are operational.

**Table 7: Total Projected Economic Impact of Operations of Mother Baby Center and Multi-Purpose Operating Room at Mercy Hospital: Anoka County**

	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$3.6	28	\$1.8
Indirect	\$0.8	7	\$0.2
Induced	\$1.1	10	\$0.3
<b>Total</b>	<b>\$ 5.5</b>	<b>45</b>	<b>\$ 2.3</b>
University of Minnesota Extension			

## BEYOND ECONOMIC CONTRIBUTION

This study is designed to measure the economic contribution of Mercy and Unity hospitals. In terms of pure theory, economic contribution is driven by direct expenditures of the hospitals for day-to-day operations and for capital improvements. This approach, while theoretically correct, often misses other important economic and social connections and contributions. This section of the report highlights a few of the important contributions Mercy and Unity hospitals make to their communities beyond economic contribution.

### Associated Physicians and Specialists

The analysis of the day-to-day operations includes direct expenditures by the two hospitals for goods and supplies and for their employees. This analysis excludes physicians and specialists who are not direct employees of the hospitals, but who use the hospital in their private practices. Currently, physicians and specialists utilize hospital space, such as the operating rooms. However, they are not direct employees of the hospital. Patients are then billed separately by the hospital for services provided by the hospital and its staff and then also from the physician or specialists for the services provided by that individual. Since the physicians and specialists are not employees of the hospital, their wages, salaries, and benefits (and those of their private practices) are not included in this analysis. It is clear, however, that the physicians and specialists require the presence of the hospital for their practices to be viable. Further, the expenditure of the physician and specialist paychecks in the community creates significant economic contribution not accounted for in this study.

### Medical Office Building

A private developer, Frauenshuh HealthCare Real Estate Solutions, is constructing a medical office building across the street from Mercy Hospital. The building will house multiple medical service providers. These providers will work in close connection with Mercy Hospitals to provide patient care (following the same model as explained above regarding associated physicians and specialists). Since the building is being constructed by private developers and will house medical service providers not directly employed by Mercy hospital, the economic contribution of the building is not included in this analysis. However, as with the associated physicians and specialists, the building will provide a significant economic contribution to the study area.

### Research Dollars

In 2012, Mercy and Unity hospitals received two federal grants totaling \$38,400. The economic contribution of the grants is included in the above analysis, since the grants are expended by the hospitals. Federal grants help fund important medical research allowing the hospitals to contribute to the community in ways beyond financial contributions.

### Volunteers

Volunteers play a critical role in the functioning of Mercy and Unity hospitals. In 2012, nearly 1,000 volunteers provided 39,440 hours of service to the two hospitals. These volunteers (assuming an average wage of \$22.14 an hour) provided Mercy and Unity hospitals with \$873,200 worth of services, which is not included in the economic contribution analysis.

Volunteers at Mercy Hospital provide service in patient care, guest services, and support services. Volunteers are organized in conjunction with the Mercy Hospital Auxiliary. At Unity Hospital, all

active volunteers are members of the Unity Hospital Auxiliary, which is organized as a service auxiliary. In addition to volunteering, the Unity Hospital Auxiliary raises funds through the hospital gift shop and other fundraising activities. Funds raised help purchase equipment and supplies in the hospital, as well as provide scholarships in healthcare related fields.

### Community Benefits and Contributions

In 2012, Mercy and Unity hospitals provided \$84.5 million in benefits to the communities they serve (table 8). These contributions include \$68.0 million in care that was 1) not compensated, 2) provided at a discount, or 3) provided at a loss to the hospitals. The two hospitals also paid \$12.7 million in taxes and fees, including the Minnesota Care Tax and the Medicaid Surcharge. Above and beyond those contributions, Mercy and Unity hospitals provided \$3.7 million to community efforts, including education and workforce development, community services, and cash and in-kind donations.

Care Provided Without Compensation, at a Discount, or at a Loss	\$68.0
Taxes and Fees, including Medicaid Surcharge, Minnesota Care, and Property Taxes	\$12.7
Education and Workforce Development	\$1.8
Community Services	\$1.5
Community Building and Benefits	\$0.2
Cash and In-Kind Donations	\$0.1
Total	\$84.5
University of Minnesota Extension	

### Mercy and Unity Hospitals Foundation

The Mercy and Unity Hospitals Foundation supports patient care, community health, and quality of life initiatives for Mercy and Unity hospitals' patients and their families. In 2012, the Foundation raised \$1.2 million in charitable donations and granted \$565,000 to the hospitals and to the community.

Efforts supported by the Foundation include capital improvement projects, such as investments in audio-visual equipment and medical equipment. However, the Foundation also assisted in funding community benefit programs that provide health screenings, children's literacy programs, and safety education.

The Foundation dedicated funds directly to patients, funding emergency dental work, newborn swaddles, and helping families remain close to their loved ones by covering costs hotel accommodations. Further, the Foundation assisted cancer patients in financial crisis by paying mortgage, rent, and utility bills.

The Foundation also extended its generosity to employees of the hospitals. They provided staff education, through conferences and trainings and course work. They also helped to fund the Employee Assistance Program for employees in financial crisis.

## SUMMARY

Mercy and Unity hospitals, located in the northern Twin Cities metro, both trace their histories to the influx of new suburban residents following World War II. As returning war veterans and their young families moved to the north of downtown Minneapolis and St. Paul, a need for medical services arose. In response, local communities collaborated to build two new hospitals.

These hospitals have grown and evolved to provide critical healthcare services to residents of the northern Twin Cities metropolitan region. Operated by Allina Health, the two hospitals provide care for citizens in Maple Grove, Osseo, Anoka, Coon Rapids, Elk River, Rogers, Blaine, Fridley, Hilltop, Mounds View, Spring Lake Park, and surrounding communities.

In 2012, Mercy and Unity hospitals directly employed 3,730 individuals. The two hospitals spent \$544.7 million dollars in to provide patient care. Approximately half of those expenditures, \$272.0 million, went to employees as wages, salaries, and benefits. The remaining funds went to purchase supplies (goods and services) necessary for operations. Of the total \$544.7 million in expenditures, \$141.8 was spent in Anoka County and \$266.3 million in the eleven-county Twin Cities metro area.

As purchases are directly made by Mercy and Unity hospitals, a ripple effect is generated as suppliers to the hospitals and their employees increase their sales and employment. In 2012, Mercy and Unity hospitals, through those ripples, contributed an estimated \$507.7 million in economic activity to the economy of the Twin Cities eleven-county metro. Mercy and Unity hospitals supported employment for 4,990 metro residents. These jobs paid \$342.4 million in labor income. Supplies purchased locally include medical equipment and supplies, building maintenance and repair services, and housekeeping.

Of the counties in Minnesota, Anoka County benefitted the most from the presence of Mercy and Unity hospitals. In 2012, Mercy and Unity hospitals contributed \$220.6 million in economic activity to Anoka County. This includes 2,690 jobs which paid \$164.9 million in labor income to Anoka County residents. The high level of labor income positively impacts other businesses in Anoka County. The highest positive benefits accrued to general retail stores, health care, and food services and drinking places.

Allina Health continues to invest in the future of Anoka County. Between 2012 and 2014, Allina Health intends to spend \$56.9 million on capital improvements, including a new data center, a transitional care unit, a mother baby center, a new multi-purpose operating room, and the remodeling of the entrance and gift shop at Mercy Hospital. These capital improvement expenditures will stimulate \$84.2 million in economic activity in Anoka County and support 780 jobs paying \$35.1 million in labor income.

Finally, Mercy and Unity hospitals support their communities beyond their economic contribution. In 2012, Mercy and Unity hospitals contributed \$84.5 million to the communities in which they are located. This analysis does not measure contributions in the local economy derived from the compensation received by physicians and specialists that operate their own private practices, but use hospital facilities. The economic contribution of these physicians and specialists is likely significant.

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*Mercy and Unity hospitals, through expenditures for operations, contribute \$507.7 million in economic activity and support jobs for 4,990 people in the Twin Cities metro.*

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## APPENDIX 1: METHODOLOGY

Special models, called input-output models, exist to conduct economic impact analysis. There are several input-output models available. IMPLAN (Impact Analysis for PLANning, Minnesota IMPLAN Group)<sup>2</sup> is one such model. Many economists use IMPLAN for economic contribution analysis because it can measure output and employment impacts, is available on a county-by-county basis, and is flexible for the user. IMPLAN has some limitations and qualifications, but it is one of the best tools available to economists for input-output modeling. Understanding the IMPLAN tool, its capabilities, and its limitations will help ensure the best results from the model.

One of the most critical aspects of understanding economic impact analysis is the distinction between the “local” and “non-local” economy. The local economy is identified as part of the model-building process. Either the group requesting the study or the analyst defines the local area. Typically, the study area (the local economy) is a county or a group of counties that share economic linkages. In this study, two study areas were considered – Hennepin County and the Twin Cities eleven-county metropolitan region.

A few definitions are essential in order to properly read the results of an IMPLAN analysis. The terms and their definitions are provided below.

### Output

Output is measured in dollars and is equivalent to total sales. The output measure can include significant “double counting.” Think of corn, for example. The value of the corn is counted when it is sold to the mill, again when it is sold to the dairy farmer, again as part of the price of fluid milk, and yet again when it is sold as cheese. The value of the corn is built into the price of each of these items and then the sales of each of these items are added up to get total sales (or output).

### Employment

Employment includes full- and part-time workers and is measured in annual average jobs, not full-time equivalents (FTE’s). IMPLAN includes total wage and salaried employees, as well as the self-employed, in employment estimates. Because employment is measured in jobs and not in dollar values, it tends to be a very stable metric.

### Labor Income

Labor income measures the value added to the product by the labor component. So, in the corn example when the corn is sold to the mill, a certain percentage of the sale goes to the farmer for his/her labor. Then when the mill sells the corn as feed to dairy farmers, it includes some markup for its labor costs in the price. When dairy farmers sell the milk to the cheese manufacturer, they include a value for their labor. These individual value increments for labor can be measured, which amounts to labor income. Labor income does *not* include double counting.

### Direct Impact

Direct impact is equivalent to the initial activity in the economy. In this study, it is spending by Mercy and Unity hospitals on operating expenses – supplies and services for the hospitals and salaries, wages and benefits.

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<sup>2</sup> IMPLAN Version 3.0 was used in this analysis. The trade flows model with SAM multipliers was implemented.

### Indirect Impact

The indirect impact is the summation of changes in the local economy that occur due to **spending for inputs** (goods and services) by the industry or industries directly impacted. For instance, if employment in a manufacturing plant increases by 100 jobs, this implies a corresponding increase in output by the plant. As the plant increases output, it must also purchase more inputs, such as electricity, steel, and equipment. As the plant increases purchases of these items, its suppliers must also increase production, and so forth. As these ripples move through the economy, they can be captured and measured. Ripples related to the purchase of goods and services are indirect impacts. In this study, indirect impacts are those associated with spending by the hospital for operating items and for capital outlays.

### Induced Impact

The induced impact is the summation of changes in the local economy that occur due to **spending by labor**. For instance, if employment in a manufacturing plant increases by 100 jobs, the new employees will have more money to spend to purchase housing, buy groceries, and go out to dinner. As they spend their new income, more activity occurs in the local economy. Induced impacts also include spending by labor generated by indirect impacts. So, if the hospital purchases services from a local tax preparer, spending of the tax preparer's wages would also create induced impacts. Primarily, in this study, the induced impacts are those economic changes related to spending by hospital employees.

### Total Impact

The total impact is the summation of the direct, indirect, and induced impacts.

### Input-Output, Supply and Demand, and Size of Market

Care must be taken when using regional input-output models to ensure they are being used in the appropriate type of analysis. If input-output models are used to examine the impact or the contribution of an industry that is so large that its expansion or contraction results in such major shifts in supply and demand that prices of inputs and labor change, input-output can overstate the impacts or contributions. While Mercy and Unity hospitals are a major component of the Minnesota economy, it is not likely that its existence has an impact on national prices. Hence, the model should estimate the contributions reliably.

## APPENDIX 2: ECONOMIC CONTRIBUTION OF MERCY AND UNITY HOSPITALS INDIVIDUALLY

The analysis presented in this report focused on the economic contribution on Mercy and Unity hospitals jointly. The tables in this appendix present the results for the individual hospitals.

	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$89.7	1,320	\$89.2
Indirect	\$0.8	10	\$0.3
Induced	\$48.5	440	\$15.2
Total	\$ 139.0	1,770	\$ 104.7
University of Minnesota Extension			

	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$163.7	2,050	\$162.0
Indirect	\$3.3	25	\$1.4
Induced	\$142.4	1,050	\$48.7
Total	\$ 309.4	3,125	\$ 212.1
University of Minnesota Extension			

	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$52.0	630	\$50.6
Indirect	\$2.0	20	\$1.0
Induced	\$27.5	250	\$8.6
Total	\$ 81.5	900	\$ 60.2
University of Minnesota Extension			

**Table A4: Total Economic Contribution of Unity Hospital's Operations on the Eleven-County Metro, 2012**

	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$102.5	1,170	\$96.4
Indirect	\$11.0	80	\$4.9
Induced	\$84.8	620	\$29.0
<b>Total</b>	<b>\$ 198.3</b>	<b>1,870</b>	<b>\$ 130.3</b>
University of Minnesota Extension			

### APPENDIX THREE: ECONOMIC CONTRIBUTION OF INDIVIDUAL CAPITAL INVESTMENT PROJECTS

The total economic contribution of capital improvements projects from 2012-2014 is summarized in the main body of this report. In this appendix, the economic contribution of each individual project is provided. Construction-related impacts are listed for all projects. Potential economic contributions of operations are provided for the Mother Baby Center and the multi-purpose operating room, both at the Mercy campus. Impacts related to the operations of the data center are included in the direct impact of the hospitals as highlighted in the report, as the data center is already operational. The transitional care unit will be staffed by the Benedictine Health System and therefore will not create impacts related to Mercy and Unity hospitals. Finally, the remodeling activity is not expected to change current employment or expenditures by the two hospitals.

<b>Table A5: Total Economic Impact of Allina Health Data Center Construction Related to Mercy and Unity Hospitals on Anoka County</b>			
	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$16.8	130	\$6.6
Indirect	\$3.1	30	\$1.7
Induced	\$4.3	40	\$1.3
<b>Total</b>	<b>\$ 24.2</b>	<b>200</b>	<b>\$ 9.6</b>
University of Minnesota Extension			

<b>Table A6: Total Projected Economic Impact of Transitional Care Unit Construction Related to Mercy and Unity Hospitals on Anoka County</b>			
	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$1.5	15	\$0.7
Indirect	\$0.3	3	\$0.1
Induced	\$0.5	4	\$0.1
<b>Total</b>	<b>\$ 2.3</b>	<b>22</b>	<b>\$ 0.9</b>
University of Minnesota Extension			

<b>Table A7: Total Projected Economic Impact of Construction of Mother Baby Center on <u>Anoka County</u></b>			
	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$30.2	295	\$14.6
Indirect	\$5.8	55	\$2.1
Induced	\$9.1	85	\$2.8
<b>Total</b>	<b>\$ 45.1</b>	<b>435</b>	<b>\$ 19.5</b>
University of Minnesota Extension			

<b>Table A8: Total Projected Economic Impact of Operations of Mother Baby Center on <u>Anoka County</u></b>			
	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$3.3	22	\$1.7
Indirect	\$0.7	6	\$0.2
Induced	\$1.0	10	\$0.3
<b>Total</b>	<b>\$ 5.0</b>	<b>38</b>	<b>\$ 2.2</b>
University of Minnesota Extension			

<b>Table A9: Total Projected Economic Impact of Construction of Multi-Purpose Operating Room on <u>Anoka County</u></b>			
	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$6.3	60	\$3.0
Indirect	\$1.2	10	\$0.4
Induced	\$1.9	20	\$0.6
<b>Total</b>	<b>\$ 9.4</b>	<b>90</b>	<b>\$ 4.0</b>
University of Minnesota Extension			

<b>Table A10: Total Projected Economic Impact of Operations of Multi-Purpose Operating Room on Anoka County</b>			
	<b>Output</b>	<b>Employment</b>	<b>Labor Income</b>
Direct	\$290,000	6	\$100,000
Indirect	\$65,000	1	\$21,000
Induced	\$70,000	1	\$21,000
<b>Total</b>	<b>\$425,000</b>	<b>8</b>	<b>\$142,000</b>
University of Minnesota Extension			

<b>Table A11: Total Projected Economic Impact of Construction Phase of Mercy Hospital Entrance/Gift Shop Remodel on Anoka County</b>			
	<b>Output (Millions)</b>	<b>Employment</b>	<b>Labor Income (Millions)</b>
Direct	\$2.1	20	\$1.1
Indirect	\$0.4	4	\$0.1
Induced	\$0.7	6	\$0.2
<b>Total</b>	<b>\$ 3.2</b>	<b>30</b>	<b>\$ 1.4</b>
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