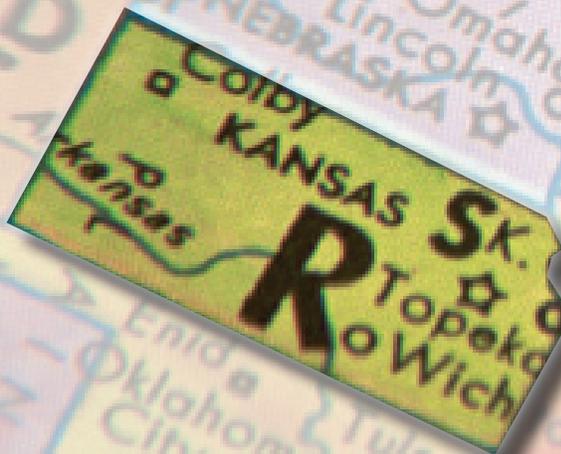


The Economic Impact of Mercy on Columbus

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Executive Summary

Mercy Maude Norton Hospital Columbus was founded in 1917 and joined the Mercy family in 2009. It serves as an important community based critical access hospital for all of Cherokee County, Kansas. Mercy is supported by a staff of 40 full-time equivalent co-workers (FTEs) including physicians, nurses and other staff members. The hospital has 25 beds and annually provides out-patient services to nearly 11,000 area individuals. The facility handled 2,100 emergency room visits in fiscal year 2011 (July 1, 2010 - June 30, 2011). As part of Mercy Health, Mercy Maude Norton Hospital Columbus has implemented a state-of-the-art, integrated, advanced electronic health records system to meet the demand for high quality health care services while controlling costs. A not-for-profit organization, Mercy focuses on the well-being of the communities it serves by providing efficient, high quality, accessible health care. Mercy's business endeavors, capital investments and employment opportunities in the city provide an impressive and permanent boost to the area's economy.

Our economic analysis of Mercy's data show the institutional impact on the city of Columbus in FY 2011 as follows:

- **\$4.4 million in spending in Columbus by Mercy's facilities and its suppliers**
- **\$1.9 million in direct payroll (before benefits) for 40 employees**
- **\$225,000 in direct capital investment, with projected capital initiatives exceeding \$793,000 over the next two years**
- **\$112,000 in annual local and state taxes**
- **Over \$188,000 provided to financially indigent persons without insurance, unpaid cost of Medicaid, and other community benefits.**

In aggregate, the results indicate that Mercy's economic contribution to the city was \$4.9 million in FY 2011. Even with very conservative projections for spending and growth, the operations will have a substantial impact on both the quality of life of Columbus residents and the economic development of the area over the next decade. Assuming Mercy's growth in spending and wages increases at a modest 2% annually over the next 10 years, Mercy will generate almost \$61 million in total economic benefits for the city during this time period.

Introduction

The purpose of this study is to measure the overall economic impact of Mercy on the city of Columbus and the surrounding area. With more than 90 years of experience in providing medical services in the region, Mercy has developed an unparalleled reputation for providing high quality care to patients, many of whom would otherwise be under-served. Through state-of-the-art facilities, residents access the latest technology and physicians in all major specialties. Mercy is also a leader in providing health care to the indigent and uninsured through its charitable programs. This is a critical safety net because 13% of Kansas residents lack health insurance.

Before reporting the findings of our economic analysis, it is necessary to first provide a brief background discussion on the health care sector to give some context to the results. We also describe the historical development of Mercy and its current facilities to provide the reader with some basic knowledge of the environment within which it operates and serves. Finally, the study methodology and the results are highlighted in an evaluation of the economic footprint Mercy has on the city of Columbus.

The U.S. Health Care Sector

Even in the current recession, the health care sector has been consistently near the top of the employer list for creating jobs.¹ Recent government reports indicate employment in the sector has been rising by 24,000 positions per month despite a national unemployment rate near record highs. There are more than 5.4 million people working in U.S. hospitals. According to the Bureau of Labor Statistics, the healthcare industry will generate 3.2 million new wage and salary jobs between 2008 and 2018, more than any other industry in the U.S.

In terms of total health care expenditures over the last four decades, the U.S. health care sector has experienced exponential growth with aggregate expenditures increasing from \$74.9 billion in 1970 to \$2.7 trillion in 2011. This represents a compound annual growth rate of 9.3% per year over a 40 year period. Perhaps most significant is that in 1970, health care expenditures represented only 7.2% of Gross Domestic Product (GDP) compared to 17.7% in 2011. On a per capita basis, the average American consumed \$8,648 in health care services in 2011. This is projected to increase 62% to \$13,709 by 2020.

¹This section draws on statistical data from the U.S. Bureau of Census, the Bureau of Economic Analysis of the Department of Commerce, the Centers for Medicare and Medicaid Services of the Office of the Actuary, the National Health Statistics Group, and the American Hospital Association.

This upward trend is not expected to abate in the near future. The majority of health care expenditures in the U. S. can be attributed to hospital care and professional services which accounted for 62% of total expenditures. Only a small fraction of the growth in expenditures is attributable to an expanding population. During the period of 2000 to 2010, the U.S. population grew at a rate of less than 1% annually, from 283 million to 304 million people. Rather, the rising demand for medical care reflects an aging population which requires more services. The nation's elderly population is on a steady rise as the baby boomer generation enters their 60s and moves into retirement. Americans over 60 comprise one of the fastest growing segments of the population, a segment which grew 24.6% between 2000 and 2010. As a greater percentage of the population enters later life stages, increased medical services will be required for their care putting a greater strain on an already stressed health care system. While those 65 and older make up 13.2% of the overall population, they represented 42.9% of those individuals in the top 10% of health care expenditures. The age 65+ demographic is expected to more than double from 2005 to 2050 (from 37 million to 81 million). Health care costs will rise correspondingly on a similar scale.

Health Care in Kansas

Kansas' health care sector generated a significant number of private jobs in the state and is its most rapidly expanding economic segment.² Over 162,000 people (11.7% of the workforce) are employed in some aspect of health care service, ranking the state at a strong position nationally for employment in this sector. Even during the recent recession when Kansas lost 9,500 jobs between 2009 and 2010 alone, the state's health care providers continued to create jobs. During the same period, the health care industry added 5,700 positions giving it one of the largest industry-wide net employment growth rates in the state. The health care sector in Kansas is projected to add another 37,630 new full-time equivalent jobs (FTEs) by 2018. According to the latest data available, Kansas' 126 licensed hospitals directly employ 54,400 individuals with an annual payroll of \$2.3 billion. Hospitals offer high-paying jobs to skilled professionals across the state. In 2010, employees in the health care sector had average hourly earnings that were 17% above the state average. Six out of the top 10 highest-paying occupations in the state are in health care. The state's hospitals take care of 6.7 million outpatients and 2 million inpatients annually while serving an average of 14,315 patients daily, generating \$5.8 billion in operating revenues. The health care and social assistance sector is currently the 2 largest private sector industry in Kansas, contributing 8.2% rd towards the state's economy. To improve quality of service and efficiency, the

²This section draws on data released by the Oklahoma Department of Commerce, U.S. Bureau of Economic Analysis, U.S. Census Bureau and the Oklahoma Hospital Association.

state's health care providers continually adopt technological advances. Its hospitals employ the latest medical technology and are implementing electronic medical records to improve health care delivery and reduce costs. Because health care organizations create high paying jobs while improving the quality of life of all residents, they have been one of the bright spots in the state's economy.

Mercy Health

St. Louis-based Mercy is the eighth largest Catholic, not-for-profit regional health system in the U.S. and the biggest health system in the Central Midwest (Iowa, Missouri, Illinois, Kansas, Arkansas and Oklahoma). Mercy's primary mission is to provide optimized care both in terms of patient health, exceptional service, and operational efficiency. In FY 2011, it generated \$4.2 billion in revenue based on investments totaling \$2.1 billion in property and equipment. Through a combination of personal and clinical services, Mercy consistently offers all patients highquality medical services which are continuously evaluated to achieve improvements.

The founding of Mercy traces back to Ireland nearly two centuries ago when Catherine McAuley established the Sisters of Mercy. Her vision was to assist the sick, poor, and uneducated - especially women, children, and the elderly. In the U.S., the Sisters of Mercy traveled to many communities to open hospitals and schools. The Sisters that arrived in St. Louis in 1856 turned their original school building into a 25-bed infirmary in 1871 and the legacy of compassionate care and exceptional service was born. From its humble beginning, Mercy has developed into a first class health system with 3,984 beds in seven states. Its regional facilities provide annual outpatient services to more than 6 million individuals along with inpatient and outpatient surgical procedures for 118,000 people. Mercy is dedicated to helping those in need of health care but who cannot afford the services. It provides benefits to each community through charity care, the unpaid cost of Medicaid and other government programs' shortfalls, and local programs that focus on improving the health of the communities served.

Overall, Mercy provided uncompensated health care exceeding a cost of \$216 million in FY 2011 to financially indigent persons without insurance, unpaid costs of Medicaid, and other community benefits - over \$4.3 million provided in Kansas alone. In the mid-1990s, ministries were created in Louisiana, Mississippi, and Texas to meet the ongoing health needs that are best served outside of acute care facilities. For example, in Laredo, Texas these initiatives include a shelter for abused women and children, a mobile health unit, medical and dental services in a low-cost clinic, and educational training and

support. Mercy Family Center in New Orleans focuses on behavioral health services for adolescents, and the Mississippi Health Advocacy Program is a voice for all the under-served and economically poor throughout the state. In April 2011, Mercy donated \$500,000 in cash to two dozen community programs in Mercy's service area. On a monthly basis, between \$5,000 and \$10,000 worth of surplus medical supplies are donated to third-world countries, thus re-purposing material that could have gone to landfills. Mercy also offers educational programs such as women's wellness, cardiac health, etc. which also make significant contributions to the health of the communities served.

Nationally, Mercy has an integrated structure comprised of 31 acute care hospitals, three heart hospitals, one rehabilitation hospital, hundreds of physician's offices, and many nursing facilities. In addition to a state health advocacy program in Mississippi, Mercy delivers health care services in six states (Arkansas, Kansas, Louisiana, Missouri, Oklahoma, and Texas) through 36,900 co-workers and 4,918 medical staff members. Mercy's efforts to create a stronger, more integrated health system have been repeatedly recognized through the health analytics firm SDI and their survey of top integrated delivery networks. Mercy's hospital in Springfield, MO, has been named in the Top 100 list for more than a decade, and was No. 1 both in 2007 and 2009. Mercy's hospital in St. Louis joined the list in 2007 at No. 69 and leaped to No. 28 in 2009. In 2011, Mercy's Springfield and St. Louis locations were ranked third and sixth respectively. This ranking is based on the ability to act in a unified manner in eight different categories including financial stability, technology, contractual capability, hospital utilization, access to services, and physician quality. Mercy is ranked as a leader by the Healthcare Information and Management Systems Society. It is among the top 6% of all U.S. health care organizations for the use of a comprehensive electronic health record system that provides realtime, paperless access to patient information. All Mercy hospitals utilizing its electronic health record system as of June 30, 2011 met the Federal Government's Meaningful Use Standards, which are guidelines for tracking and monitoring patient data electronically.

Facilities in Columbus

Mercy Maude Norton Hospital Columbus was founded in 1917 and joined Mercy family in 2009. During this time, the hospital has grown into an community based critical access hospital in Cherokee County, Kansas. The hospital is named after Maude Norton, the daughter of Colonel William S. Norton, who donated his home in her memory to the city of Columbus for use as a hospital. The major services provided are: general acute care including surgery, family medicine, cardiology, colon/rectal, skilled rehabilitation

therapy, home health and hospice, 24 hour emergency care, a vast array of outpatient services including laboratory and imaging services, physical, speech and occupational therapy, respiratory therapy, and an industrial medicine program. The hospital offers weekly outreach clinics focusing on gastroenterology, cardiology, heart and vascular care, podiatry, urology, ultra-sounds, as well as a mobile mammography van.

Equipped with 25 bed units, the facilities served 2,100 emergency room visitors and performed 77 surgical procedures for outpatients in the year 2011. Mercy Maude Norton Hospital Columbus is supported by a staff of 40, including physicians, nurses and other staff members. It is affiliated with Mercy Hospital Joplin located across the state line in Joplin, Missouri. This allows access to a broad array of medical professionals and specialists who complement the staff in Columbus. The hospital prides itself on its continued care for the community through a team of skilled health professionals.

In order to provide high quality medical service while controlling cost, Mercy Hospital Columbus invested a large amount of capital to establish an integrated electronic health record system to offer patients convenience. Mercy has long met the health needs of the community and will continue to lead the way in healthcare for the area. The hospital was selected as the Columbus Business of the Year in 2003 and received the Award of Merit from the Kansas Department of Justice in 2002 and 2005.

Assessing Economic Impact

An economic impact analysis measures the total value the organization's spending has in a community, the economy, and local residents. The economic benefits are derived not only from the direct spending of the organization, but also from the spending of local suppliers and households that recirculate the money. When assessing the impact of a business, there are three major influences to consider:

Direct impact represents the amount of money directly spent by Mercy in the local and state economies to provide health care and related services. It includes items such as operational spending, purchases of supplies, salaries and wages, payment of taxes, and capital expenditures.

Indirect impact represents the spending by other businesses in the community that supply and support the activities of Mercy. This spending creates additional jobs and income for vendors and service providers who expand in response to the success of the businesses they serve.

Induced impact represents the local household spending as a result of increased income from direct and indirect impacts.

Study Methodology

To measure the economic footprint of a business, economists have developed complex econometric models to capture the relationships among key variables and calculate the overall impact in dollars. This study draws on multipliers developed by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce from the Regional Input - Output Modeling System, commonly known as RIMS II. The multipliers are employment, output, and earnings. Each multiplier captures the total impact from a change in a given economic activity. The employment multiplier calculates the number of total jobs in the local economy that will be created from adding a given number of new jobs by an employer. The output multiplier tallies the total value of additional spending that will be stimulated in the economy for each dollar increase in an organization's spending. Lastly, the earnings multiplier indicates the total amount of new earnings in the community that will be generated for each dollar of wages earned by the organization's workforce.

The RIMS II model is in its third version since the BEA first released it in the 1970s. It is one of three models widely used in economic impact studies in the U. S. for both the public and private sectors.³ All three models use government data to evaluate the interaction between industries and households in order to identify how transactions impact production and consumption of goods and services. The RIMS II model provides analysts with multipliers for 406 detailed industries using benchmark data. Furthermore, the model gives an estimation of the impact of an organization's operations in terms of total spending, earnings, and employment for a region or state. Both the short and long-term impacts of development can be considered.

³The alternative models are IMPLAN and REMI. The IMPLAN model was developed by the U.S. Forest Service in 1979 and the software is now commercially available from IMPLAN Group, Inc. REMI is another commercially marketed system, distributed by Regional Economic Models, Inc.

Results

The following section describes Mercy's economic impact on the city of Columbus.

A. Economic Impact from Operations

Table 1 below provides a summary of Mercy's operational expenditures in Columbus. The economic impact represents the aggregate spending by Mercy, supporting businesses, and households in Columbus as a result of its facilities. Total direct spending in Columbus was \$2.4 million in FY 2011. Two major components (payroll and non-payroll spending) are included in the data. Mercy's non-payroll operational spending in Columbus includes non-medical supplies as well as patient medical and drug purchases, utilities, and communication tools. Overall in FY 2011, Mercy's direct operational spending along with the indirect spending of suppliers and households contributed \$4.4 million to the city's economy. In order to continue to meet market demand with its high level of quality service, Mercy expects to increase its operational spending in the future.

Table 1
Operational Impact for FY2011

	Direct Spending*	Indirect Spending**	Total Spending
Goods & Services	\$2,400,000	\$2,000,000	\$4,400,000

* Employment earnings are included in direct spending

** Includes indirect and induced impacts

B. Job Creation and Employment

In FY 2011, Mercy had 40 full-time equivalent employees in Columbus. As reported in Table 2, Mercy's annual payroll in the city was \$2.4 million (\$1.9 million before benefits). These numbers include a competitive employee benefit package of health insurance, dental coverage, tuition reimbursement, a 401K plan, etc. that comprise 20% of salaries and wages. The average annual income of Mercy employees in Columbus for 2011 is \$46,909 (excluding benefits). In comparison, the state benchmark per capital income for 2011 was \$40,481. The fact that Mercy's average salary is significantly greater than that for a typical Kansas worker highlights the significant number of technical and professional positions in the organization. With an ability to create and retain skilled, high-wage jobs, Mercy has displayed its critical role in developing and maintaining sustainable economic growth.

The economic data indicates that every hospital job creates additional jobs in supporting fields. This fact underscores the importance of the health care sector to the local economy for its continued development. Mercy has directly created 40 FTE jobs in Columbus and we estimate that its economic activities generated an additional 30 positions in supporting industries for a total of 70 jobs. The ripple effect also magnifies the impact of Mercy’s \$2.4 million payroll, with households employed in related industries generating an additional \$1.3 million in wages and benefits. Thus, in 2011, the combined payrolls of all households impacted by Mercy’s facilities area-wide totaled \$3.6 million.

Table 2
Employment Impact for FY2011

	Direct Jobs	Indirect Jobs*	Total Jobs
Number FTE	40	30	70
Payroll**	\$2,400,000	\$1,300,000	\$3,600,000

*Includes all secondary jobs and wages created by suppliers in the community as a result of direct jobs created by Mercy.
**Payroll includes the costs for the institution’s employee benefit package.

C. Capital Expenditures

Capital spending has been constrained by the volatile economic realities of the past few years. As such, Mercy’s direct capital expenditures in Columbus reached \$225,000 in FY 2011 including construction projects and purchase of equipment. As shown in Table 3, Mercy’s 2011 spending generated another \$157,000 in indirect expenditures by other businesses and households for a total impact of \$382,000 in FY 2011. The total benefit was even greater as these developments generated new investment and employment opportunities elsewhere.

Table 3
Capital Expenditure Impact for 2011

	Direct Spending	Indirect Spending	* Total Spending
Capital Expenditures	\$225,000	\$157,000	\$382,000

* Includes indirect and induced impacts

Mercy has implemented several cutting-edge technologies to improve its quality and delivery of care. These innovative programs and integrated systems contribute to Mercy’s ability to spur and sustain new economic activity in other industry sectors and to boost the city’s economy as a whole. Projected capital spending for FY 2012 and FY 2013 in Columbus exceeds \$793,000.

D. Tax Revenues

The city will realize increased tax revenues as a result of Mercy's growing investments and other activities. As reported in Table 4 below, with a total payroll of \$2.4 million, Mercy's 40 FTEs paid \$112,000 in local and state income taxes in FY 2011.

Table 4
Direct Tax Payments for 2011

Payroll Taxes	Total Taxes
\$112,000	\$112,000

It should be noted that the present analysis considers only direct taxes and therefore understates the actual tax benefit for the area. For example, many of Mercy's co-workers own homes and vehicles and thus pay personal property taxes, sales taxes, and real estate taxes. In addition, there are indirect tax expenditures from supporting business and their employees. This study includes only direct tax payments generated by Mercy and its employees because data are not available for the other items.

E. Summary of Economic Impact for 2011

Table 5 shows Mercy will have a total economic impact of \$4.9 million on Columbus for FY 2011. This economic analysis has shown that the largest factor driving that impact is Mercy's spending on payroll. Nevertheless, capital expansion and tax revenues generated for state and local governments are also important variables in sustaining and advancing the quality of life in the community.

Table 5
Summary of Total Economic Impact for FY2011

Operational Spending	Capital Expenditures	Tax Revenues	Total Impact
\$4,400,000	\$382,000	\$112,000	\$4,894,000

Long - term Economic Impact

The current analysis demonstrates that Mercy's economic impact for FY 2011 is substantial, but strategic decision making for companies and governments require decade-long projections. Although forecasting over long time horizons is always more difficult, some reasonable assumptions can be made to guide

us. Our longer projections are based on actual institutional strategic plans for FY 2012 and FY 2013. Thereafter, we assume payrolls, operating spending, and taxes will all increase at a modest 2% rate starting in 2014 and up to 2021.

Under these conservative assumptions, Mercy will provide \$60.6 million in economic benefits to the city over the next decade. Furthermore, the annual economic impact will increase from \$4.9 million in FY 2011 to \$6.7 million by FY 2021. Factoring in the time-value of money using a 5% discount rate, the cumulative amount of annual benefit generated over the next 10 years is worth over \$46.2 million today.

Limitations of Study

All economic impact studies are based on certain assumptions and projections. We have made every effort to use reasonable assumptions and to confirm the accuracy of the data used in this analysis. Nevertheless, this study most likely understates the economic impact that Mercy has and will continue to have on the area. Because certain types of data are unavailable, the following influences were not included in our analysis:

- Many Mercy co-workers volunteer their time and money for charitable activities. This is private information and not collected by the institution.
- Considering that Mercy relies heavily on skilled professionals in providing services to the population, universities located within the area benefit from its recruitment and hiring of their graduates.
- Access to high quality health care is a major consideration in attracting new companies to a community. There is no question Mercy plays a very important role in meeting this need.

Concluding Remarks

The present study quantifies the economic impact Mercy Maude Norton has on the city of Columbus and the area. For FY 2011 alone, it contributed \$4.9 million to the city's economy. This includes \$4.4 million in operational spending (with \$3.6 million in payroll alone), \$225,000 in direct capital expenditures and \$112,000 in direct tax payments. Over the next decade, Mercy's contribution will be even more impressive. Our findings show the institution will add another \$61 million in cumulative value from FY 2012 to FY 2021. In today's dollars, this represents about \$46.2 million in new economic investment for the city.

Mercy Maude Norton has long been an economic pillar in Columbus. It has been an outstanding corporate citizen in every sense of the term. In addition to providing high quality medical care to the communities at large, Mercy is on the front line offering vital services to the indigent and the poor. In doing so, it raises the quality of life for everyone and lowers the financial burden on state and locally supported institutions. There is no question the economic impact of Mercy far exceeds the support it has received from various government entities. Mercy is an enormously valuable resource and one that offers a benefit /cost ratio among the highest we have seen.

Appendix

	Pediatric Surgery	Pediatric Medical	Adult Surgery	Adult Medical	General Services
Columbus				General Medical	Primary Care; ER; Diagnostics XRay/ Lab; SNF/Rehab Swing Bed
Fort Scott		General Medical	General Surgery; GYN; ENT; Orthopedics	General Medical; Oncology; OB/ Maternal Fetal Medicine; Cardio Pulmonary; Endo/ Musculoskeletal; Neurology	Primary Care; ER; Diagnostics; OB; Sleep Study; Swing Bed/Rehab; Palliative Care; Home Health; Cancer Center as an outreach service in partnership with the Cancer Center of Kansas; Cardiac Rehab; Physical, Occupational & Speech Therapy; Fitness Center
Independence		General Medical	General Surgery; GYN; ENT; Orthopedics Podiatry	General Medical; Oncology; OB/ Maternal Fetal Medicine; Cardio Pulmonary;	Primary Care; ER; Diagnostics; OB; Swing Bed; Sleep Study; Home Health; Cancer Center as an outreach service in partnership with the Cancer Center of Kansas; Physical, Occupational & Speech Therapy; Cardiac Rehab; Fitness Center