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By

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Executive Summary

This report estimates the economic impact of the Hauenstein Center on the greater Grand Rapids area. The Center will be located in the Saint Mary's Hospital Campus in Grand Rapids and will house a state-of-the-art neuroscience center—"a comprehensive one-stop shopping, multidisciplinary approach to care for neuroscience patients and their families."¹ In addition the Center will provide an expanded emergency/trauma department and new critical care units.

While the new Center will enable Saint Mary's to expand several of its ongoing services including its emergency room services, this study only examines the economic impact of the Center's construction and its expanded neuroscience services. The uniqueness of this Center makes it very likely that it will bring new economic activity into the area. Once in full operation in 2011, the Center's new neuroscience activities will employ 65 medical professionals and support a \$5.2 million payroll.

The overall economic impact of the new Center is much greater, however, than simply the number of people it employs or the size of its payroll. A portion of the Center's paid wages and salaries are spent on locally produced goods and services. In turn, these dollars are re-spent in the community, sometimes more than once. With each round of expenditures, these monies generate additional employment opportunities and more income to area residents.

In 2011, the Center's expanded neuroscience activities will generate a total of 173 jobs and \$12.4 million in new wages and salaries into the greater Grand Rapids area.² For every 10 employees at the medical facility, approximately 17 additional jobs will be created in 2011, and for every \$1.00 in wages earned at Center's expanded neuroscience center, another \$1.40 in wages and salaries will be generated.

The construction of the four-story, 140,000-square-foot facility and conjoining parking structure will cost an estimated \$60 million dollars. We estimate that 315 jobs will be created at the construction site. These onsite workers will generate another 294 jobs in the area and a total area-wide income in wages and salaries of \$22.1 million.

¹ *Saint Mary's Health Care Hauenstein Center Business Plan*, October 17, 2005, pg 4.

² The Greater Grand Rapids Area includes Kent, Ottawa, Muskegon, Newaygo, Ionia, and Barry counties.

Economic Impact Analysis of the Expanded Neuroscience Services at the Hauenstein Center

This study offers an estimation of the economic impact of the construction of the Hauenstein Center and the following operations of its expanded neuroscience services that it will allow.

The full impact of the future operation of the expanded neuroscience services at the Center is more than its direct hires and payroll, however. First, the full impact must include the consumer expenditures of its employees. Second, it must incorporate the impact of the additional rounds of economic activity that occur in the area. For instance, revenues from area's retailers and the hospital's local vendors are re-spent in the area through the consumer expenditures of their workers.

The methodology used to estimate the impact of the Hauenstein Center's expanded neuroscience services on the greater Grand Rapids area is described later in this report. However, before we turn to the report's findings, a brief explanation regarding the approach used in this impact study is warranted.

Unlike too many economic impact studies, this study takes into full consideration possible displacement effects that can and do occur when a new economic activity is introduced into an area. In the medical service, the introduction of a new medical facility which offers the same set of primary services as existing medical facilities will have a small economic impact on the area. Since most all of the patients served by the new facility will be area residents, the new facility's activities will come directly at the expense of the area's older facilities. While the level of care and environment may be an improvement, the new facility will generate very little economic activity. The same can be said of any new economic activity which serves the local area.

In evaluation of the economic impact of the Saint Mary's Hauenstein Center, we carefully selected only those activities which provide substantial new services to the area—the neuroscience services: services that patients previously had to go outside the area to obtain.

Employment Impact

As shown in Table 1, employment in the neuroscience activities will increase from 12 in 2007 when the Hauenstein Center will open to 65 medical professionals in 2011 when the Center is fully operational. The employment impact grows as well. In 2007, an additional 27 jobs are generated in the area due solely to the added neuroscience services at the Center. In 2011, the number increases to 108. As can be seen in the table, new employment opportunities are generated across a wide range of activities from retail to professional services to even new jobs in manufacturing—food products and printing.

Table 1 Employment Impact of the New Neuroscience Activities at the Hauenstein Center					
	2007	2008	2009	2010	2011
Direct Employment	12	32	48	64	65
New Neuroscience Activities at the Hauenstein Center					
Indirect Employment	27	56	76	106	108
Construction	3	7	10	14	16
Manufacturing	1	2	2	3	3
Wholesale Trade	1	2	2	3	3
Retail Trade	5	10	13	18	18
Finance, Insurance	1	2	3	4	4
Real Estate, Rental, Leasing	1	2	3	4	4
Profess, Tech Services	1	3	4	5	6
Admin, Waste Services	2	6	8	11	11
Educational Services	1	2	2	3	3
Health Care, Social Asst	2	4	5	8	8
Accom, Food Services	4	7	9	12	12
Other Services (excl Gov)	3	5	6	9	9
Other Industry Sectors	2	5	7	9	9
State & Local Gov	0	1	2	3	4
Total Employment Impact	39	88	124	170	173
Employment Multiplier	3.4	2.8	2.6	2.6	2.7

Quite often an employment multiplier is used to express in summary terms the economic impact of a new activity. The multiplier is simply the rate of the activity's total impact to its direct impact. In this case, the neuroscience activities at the Center have an employment multiplier of between 3.4 in the first year to 2.6 in its second and third years of operation. In other words, this means that when the Center is fully staffed in 2011, for every person working at the Center in providing new neuroscience services, another 1.7 jobs will be created in the greater Grand Rapids area.

Impact on Wages and Salaries

The new neuroscience activities at the Hauenstein Center will generate slightly more than \$2 million in wages and salaries when it opens in 2007. When in full operation in 2011, wages and salaries will have climbed to more than \$5.2 million (Table 2). A large portion of these wages and salaries will be spent on purchasing goods and services from area businesses generating more personal income in the area. The impact does not stop there, as workers who work to provide these goods and services spend their earnings as well. In addition the new economic activity will support more local governmental services as well.

Table 2 Wage and Salary Impact of the New Neuroscience Activities at the Hauenstein Center					
Wage and Salaries	2007	2008	2009	2010	2011
Direct	\$2,040,444	\$3,009,966	\$3,486,685	\$5,110,715	\$5,240,435
New Neuroscience Activities at the Hauenstein Center					
Indirect Wage and Salaries	\$1,052,338	\$2,887,633	\$4,592,535	\$6,551,593	\$7,203,014
Construction	\$99,180	\$256,100	\$419,500	\$623,200	\$735,300
Manufacturing	\$76,770	\$180,700	\$271,800	\$381,000	\$407,700
Wholesale Trade	\$49,110	\$105,900	\$153,500	\$218,300	\$235,300
Retail Trade	\$137,100	\$270,800	\$380,300	\$550,500	\$592,900
Finance, Insurance	\$14,720	\$31,500	\$46,400	\$67,260	\$74,060
Profess, Tech Services	\$56,740	\$133,400	\$202,700	\$292,400	\$322,600
Management of Companies	\$20,090	\$46,490	\$68,660	\$96,500	\$101,900
Admin, Waste Services	\$64,850	\$158,500	\$243,800	\$350,500	\$381,000
Educational Services	\$23,340	\$45,750	\$63,840	\$92,980	\$98,790
Health Care, Social Asst	\$326,556	\$1,262,034	\$2,145,315	\$2,990,285	\$3,236,565
Accom, Food Services	\$55,310	\$108,700	\$151,400	\$218,700	\$233,000
Other Services (excl Gov)	\$54,000	\$107,400	\$150,700	\$218,000	\$233,200
Other Industry Sectors	\$55,023	\$118,608	\$174,420	\$252,368	\$275,599
State and Local Government	\$19,550	\$61,750	\$120,200	\$199,600	\$275,100
Total Wages and Salaries	\$3,092,783	\$5,897,598	\$8,079,220	\$11,662,308	\$12,443,449
Income multiplier	1.52	1.96	2.32	2.28	2.37

As shown in Table 2, in 2011, the expanded neuroscience activities at the Center will generate another \$7.2 million in wages and salaries in the area, above what is paid to its own employees. In total, the expanded neuroscience activities at the Center will generate \$12.4 million in wages and salaries in the area.³

As with the case with employment, often an income multiplier is derived to express the impact of a new activity. In this case, for every dollar generated by the new neuroscience activities at the Center, between \$0.52 (2007) and \$1.37 (2011) additional income will be generated in the area.

Impact Comparison with Other Service-Providing Industries

On a per employee basis, Saint Mary's Hauenstein Center will have a greater economic impact on its surrounding area than most other service-providing industries. A major reason for this is that the Center will be offering medical services to the greater Grand Rapids area, that are not currently available. In other words, it will be capturing medical expenditures that have been leaving the area.

³ Included in these wages and salaries estimates are the additional income generated by existing workers logging in extra hours. For instance a, restaurant worker who was working 20 hours a week might now work 30 hours. Because of this, it is not correct to divide these wages and salaries estimates by employment to derive an average income per worker by industry.

Most firms in service-providing industries compete directly against other area firms in serving area customers. This means that their success, in large part, comes at the expense of other existing area firms. Therefore, the general employment multipliers for service-providing firms are quite low. In Table 3, we show the general multiplier for firms in several different service sectors. For instance, the entry of a new bank employing 100 workers will generate only an additional 15 new jobs in the area, as its entry will force existing banks to curtail their activities. The local competitive environment is so harsh among professional and technical services, that the entry of an average professional services firm employing 100 workers will, in fact, have a total impact of only 97 jobs. The firm will significantly displace work from existing firms, forcing them to lay off workers. Because the Hauenstein Center will not be competing with existing medical centers in the area, it will not have any displacement impact.

Even when compared to those few service-providing firms that serve only out-of-area customers, we estimate that the Saint Mary's Hauenstein Center will general a greater multiplier effect per worker than other activities, on average. Firms that sell to out-of-the-area customers are labeled as being part of the area's export (exporting outside the area) or base industry sector. As shown again in Table 3, the Center's expected multiplier is notably larger than all of the selected service industries except for banking.

Table 3 Comparison Employment Impacts		
	Employment Multiplier	
	General	Export or Base
Publishing, exc Internet	1.30	2.17
Banking	1.15	2.64
Securities & Commodities Trading	1.33	1.81
Insurance	1.72	2.05
Professional & Technical Ser.	0.97	1.96
Mgmnt of Companies	1.05	2.30
Educational services	1.10	1.44
Saint Mary's Hauenstein Center		2.66

Population

Although, population is not often considered an economic variable, the expanded neuroscience activities at the Hauenstein Center will generate an increase in the area's population as well. Population has a lagged response to changes in economic activities; it takes time for families to move. When the Center is in full operation in 2011, its presence will have caused population in the six-county area to increase by 90 people; by 2016, the area's population will have increased by 150 people.

Construction

The construction of the Hauenstein Center will have its own substantial impact on the area's economy, although only for the construction period. As shown in Table 4, the

construction of the four-story facility and accompanying parking structure will create 315 jobs onsite.⁴

Table 4 Economic Impact of Constructing the Hauenstein Center		
	Employment	Wage and Salaries
Direct	315	\$12,337,290
New Neuroscience Activities at the Hauenstein Center		
Indirect Wage and Salaries	294	\$9,723,830
Construction	5	\$195,830
Manufacturing	24	\$1,594,000
Wholesale Trade	14	\$828,500
Retail Trade	64	\$1,584,000
Finance, Insurance	11	\$552,700
Profess, Tech Services	32	\$1,296,000
Real Estate and Leasing	15	\$187,200
Admin, Waste Services	25	\$649,200
Educational Services	7	\$173,100
Health Care, Social Asst	17	\$615,400
Accom, Food Services	27	\$399,800
Other Services (excl Gov)	23	\$479,600
Other Industry Sectors	23	\$841,400
State and Local Government	6	\$327,100
Total	609	\$22,061,120
Income multiplier	1.93	1.79

These 315 onsite construction workers will generate another 294 jobs in the area, and their estimated wages of \$12.3 million will generate another \$9.7 million in income for area residents for a total of \$22.1 million during the construction period. As was the case above, these new jobs would be created across a wide range of industries.

Methodology

The W.E. Upjohn Institute maintains an economic computer model especially designed to estimate the economic impact of changes in the greater Grand Rapids area which includes the three metropolitan areas of Grand Rapids-Wyoming (Kent, Newaygo, Ionia and Barry Counties),

⁴ These jobs are estimated as “job-years.” Job years are defined as jobs that last for a year. If two people work six months each on the site, it is counted as being one job-year.

Muskegon-Norton Shores (Muskegon County) and Holland-Grand Haven (Ottawa County). The model was constructed by Regional Economic Models Incorporated (REMI) and contains three separate components that together capture the resulting total impact on the local economy because of a change in employment. These components are:

- an input-output model that estimates the impact on the local economy of changes in inter-industry purchases. This component of the model captures the impact of an increase in orders to local suppliers of goods and services, as well as, the impact of households increasing their purchases of consumer goods and services.
- a relative wage component that estimates the impact of the expected changes in the area's cost structure due to changes in economic activity. For instance when a major employer moves into the area, it can cause wages to increase across most all industries due to the increased demand for workers and other local resources. This boost in wages, while generating additional consumption expenditures, increases the cost of doing business in the area, making the area slightly less attractive to other industries.
- a forecasting and demographic component that forecasts the resulting changes in future employment and population levels due to a change in economic activity.

The model generates two separate “realities” for the period 2006 to 2011: one with the construction of the Hauenstein Center and its expanded neuroscience services and the other without this activity. It is the difference between the two that estimates the economic impact of the hospital on the county.

In preparing this impact we made the assumption that the region's other medical facilities would not enlarge their existing facilities to meet the same neuroscience services that will be offered by Saint Mary's at the Hauenstein Center.

Conclusions

When it is in full operation in 2011, the expanded neuroscience services at the Hauenstein Center will employ 65 medical employees and will support an additional 108 workers in the greater Grand Rapids area. The added services will generate \$12.4 million in new wages and salaries in the six-county region.

Finally, and more importantly, the Hauenstein Center will provide services that are not currently available to the area's residents. For those needing these services, the value of the new Center will mean more than the jobs and wages it generates.