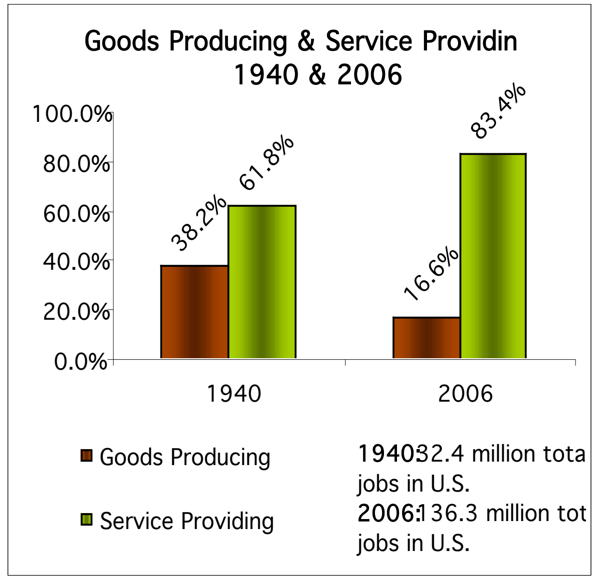
The Health Care Cluster in East Central Michigan: Observations from Three Years of Regional Collaboration

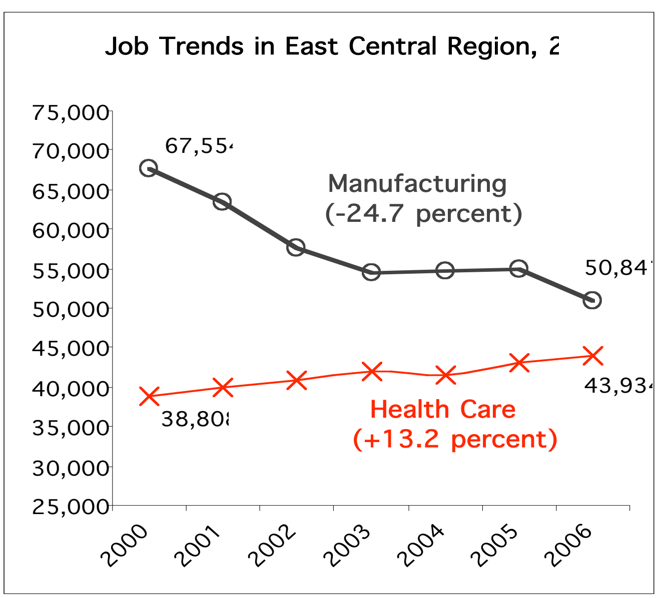
THE ECONOMIC TRANSITION FELT ACROSS THE NATION

When we think of health care in an economic context, we think about a large and growing, and increasingly vital part of our economy. We think of an industry that provides job opportunities and solid salaries to many of our residents. Once upon a time, however, our health care industry was in the background providing quality health services to workers in a primarily goods producing economy. If you were asked in 1940 what industry was large and growing, and increasingly vital to our economy, your answer would be, "manufacturing . . . of course." How much have things changed? Consider this: in 1940, the health care industry was responsible for less than 5 percent of our nation's total jobs; conversely, in that same year, the manufacturing sector was responsible for more than 30 percent of total jobs. Fast forward to the 21st Century, specifically 2006, and things look quite differently. Over this span of sixty-plus years, a sort-of "swap" took place. Last year the health care industry was responsible for 13 percent and manufacturing just 10 percent of total jobs in the U.S. economy; illustrating just one example of how our nation's economy is transitioning from a goods-producing economy to a service-providing economy. This economic transition is displayed in *Chart 1*.



REGIONAL IMPLICATIONS OF A CHANGING ECONOMY

While the economic transition from a goods-producing economy to a service-providing economy is being felt nationwide, Michigan and the East Central Region are facing an especially difficult challenge. Our state and region are historically reliant on the automotive industry to provide jobs and income both directly and indirectly to our citizens. As the domestic automobile industry continues to struggle with global competition and changing consumer demands, job losses continue to affect our region. There is good news though: throughout its history, the East Central Region has been forced to reinvent itself, and today is no exception. We have shown that our region's strong chemical, manufacturing, education, health, and professional industries are well positioned to excel in this new, changing economy; especially when they collaborate with one another. Through the collaboration between local corporations, businesses, educators, and governments, the East Central Region has seen many of its health related sectors grow over recent years. The growth in some health sectors,



the lack of growth in other health sectors, and the causes and implications of both, are the topics of this article.

Defining the East Central Health Care Cluster

In today's economy, the health care sector extends far beyond our traditional notions of "core" health care services. Therefore, when defining a health care cluster, it is very important to consider industries that produce goods or services that are substantially health related, are used in the health care delivery process, or assist in bringing health care services to local and export markets. As defined, our region's health care cluster includes the 18 industries listed in *Table 1*. This cluster definition is not all-inclusive; however, the definition attempts to look beyond traditional industry lines. Still, the majority of employment is concentrated in traditional health care industries. However, other industry sectors contribute to the overall success of our region's health care cluster; therefore, excluding them from this analysis would be incomplete.

Table 1: Defining the East Central Region's Health Care Cluster

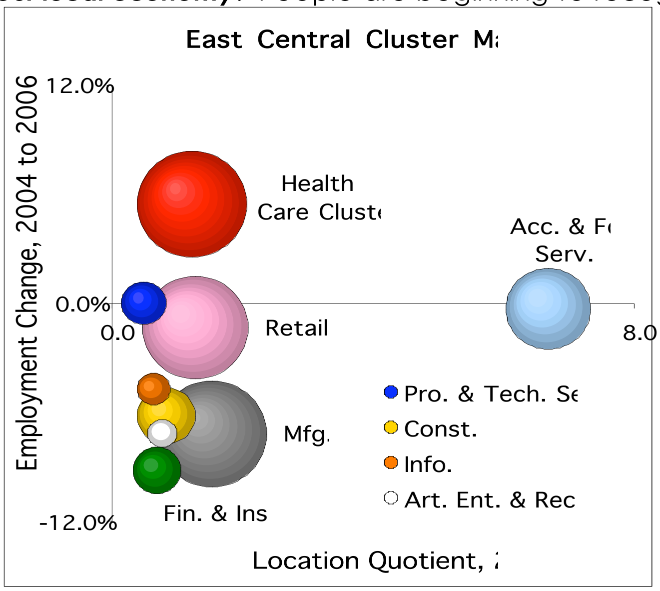
Industry	Industry Jobs in 2006	New Jobs 2004-2006	Share of Cluster Jobs	Location Quotient (LQ)	LQ Change 2004-2006
General medical and surgical hospitals	17,000	200	34%	1.48	Flat
Nursing care facilities	6,900	200	14%	1.89	0.14
Offices of physicians	4,200	-100	9%	0.87	-0.02
Home health care services	2,800	900	6%	1.43	0.37
Offices of dentists	2,500	Flat	5%	1.41	Flat
Health and personal care stores	2,500	100	5%	1.15	0.08
Individual and family services	2,400	700	5%	0.95	0.23
Residential mental health facilities	2,200	Flat	4%	1.55	Flat
Offices of other health practitioners	1,700	300	3%	1.34	0.14
Community care facilities for the elderly	1,700	-200	3%	1.20	-0.21
Vocational rehabilitation services	1,200	200	2%	1.66	0.29
Insurance carriers	1,200	-100	2%	0.43	Flat
Medical equipment and supplies manufacturing	1,100	200	2%	1.54	0.26
Other ambulatory health care services	800	200	2%	1.58	0.36
Other residential care facilities	500	Flat	1%	1.12	0.10
Outpatient care centers	500	-100	1%	0.42	-0.08
Medical and diagnostic laboratories	100	Flat	0%	0.23	Flat
Pharmaceutical and medicine manufacturing	*	*	*	*	*
Other hospitals	*	*	*	*	*
Cluster Total	***49,300***	***2,500***	***100%***	***1.22***	***0.08***

Source: MI-DLEG, Bureau of Labor Market Information & Strategic Initiatives
***** Suppressed for Confidentially

Evaluating the East Central Health Care Cluster

How does our region's health care cluster stack-up against the national health care cluster? Quite well, actually. In addition to employing nearly 50,000 people, providing about 17 percent of our region's jobs, and creating 2,500 jobs over the last two years, our health care cluster reports a location quotient of 1.22.[i] A "location quotient" is a ratio showing the share of regional cluster jobs compared to the national share of cluster jobs. A location quotient greater than one suggests that the cluster is not only meeting local demand for goods and services, but that it may be providing export goods and services to other markets. Therefore, the data suggest that our health care cluster is – to some degree – an export industry.

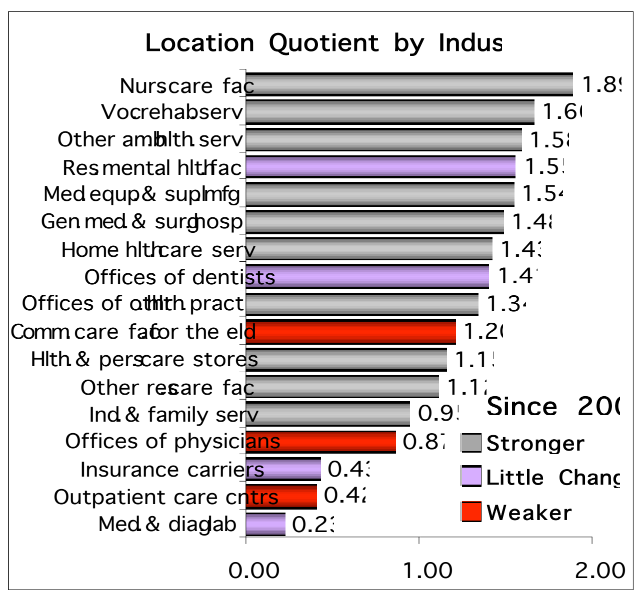
Health care is not the only export industry in East Central Michigan. Consider, for a moment, the region's accommodation and food services industry, with a large location quotient of 6.7, and the region's manufacturing industry, with a location quotient of 1.5. People in our region recognize that those two industries satisfy local demand and reach outside demand; outside demand may include people visiting our tourist destinations, or, major auto manufacturers procuring automobile parts from our factories. ***As our health care cluster grows larger and larger, it is becoming more and more apparent that health care is vital to our local economy***. People are beginning to recognize this!



To illustrate the relative importance of the region's health care cluster, consider three important measures. First, the health care cluster (represented by the red bubble) has seen jobs increase by 5.4 percent between 2004 and 2006 (vertical position of the bubble). Over the same period, total regional jobs decreased by 2.3 percent. Second, the health care cluster reported a location quotient of 1.22 (horizontal position of the bubble). Therefore, the health care sector is slightly stronger in the East Central Region than nationwide and may attract export business. Third, the health care cluster was large, employing nearly 50,000 people in the 15-county region (size of the bubble). ***While other sectors show some positive trends, only the health care cluster shows positive trends in all three measures***.

NOTES ON SPECIFIC INDUSTRIES IN THE CLUSTER

Since the East Central health care cluster is performing relatively well, what can be said of the specific industries that make-up the cluster? Between 2004 and 2006, twelve of the eighteen cluster industries were stronger regionally than nationally as measured by location quotients. Industries with the most regional strength included nursing care facilities, vocational rehabilitation services, and residential mental health facilities. These three core health care service industries have excelled regionally – as well as nationally – mainly due to growing demand for health services. In our region, this increased demand is partly due to a relatively large and growing number of retirement-age individuals. According to the Decennial Census, 24.0 percent of the East Central Population was 55-years-of-age or older, compared to just 21.0 percent nationally and 21.9 percent in Michigan. Accordingly, there were 212,600 individuals in this age group in the 15-county region. Additionally, because some regional counties are retirement destinations, we can expect our population is even older today that it was in 2000.[ii] In



addition to the aging population, our region's *vocational rehabilitation services* and *residential mental health facilities* may show particular strength due to – paradoxically – our region's economic struggles. Industry practitioners note that rehabilitation services are likely utilized more during tough economic times as individuals with disabilities seek employment opportunities by becoming job-ready. Residential mental health facilities, which include firms that provide residential care to people with substance abuse problems or mental illness also experience increased demand during times of economic hardship.

Industries that are weaker regionally than they are nationally include medical and diagnostic laboratories, outpatient care centers, and insurance carriers. These industries are diverse, and there is no single reason they are relatively less influential in the East Central Region; however, there are a few possible explanations for each: The *medical and diagnostic laboratories* industry, which provides analytic and diagnostic services to hospitals and doctors' offices, may experience less regional demand as one major customer, major hospitals, have internal diagnostic laboratories. Another major customer group, physicians' offices, has a slightly smaller presence in our region than nationally, which may cause even less demand for medical and diagnostic services. Finally, as noted by Carol Stoll, VP for Patient Affairs at Covenant Health Care, "some testing equipment is very expensive and may only be needed once every other week." As a result, firms in this industry may locate in areas with access to many customers in many markets; this can be illustrated by the industry's strength in Oakland County, where medical and diagnostic laboratories report a location quotient of 1.71. It is therefore likely that some of our region's demand for these services is filled outside the region.

The *insurance carriers* industry is smaller regionally than nationally and has seen notable job loss in recent years, especially in Saginaw County. Much of the job loss has occurred as major agencies and brokers have consolidated operations or reduced sales and support staff. Regions and states that have seen considerable growth in this industry have been either home to major corporations that are consolidating (to that location) or have experienced a high number of new insurance businesses started by downsized employees-become-entrepreneurs. Unfortunately, the East Central region has seen neither.

Finally, the *outpatient care center* industry is relatively weaker in our region than it is nationally. While some components of this industry are well represented in our region others are not, including kidney dialysis centers, HMO medical centers, and family planning centers.[iii] The absence of substantial employment in these industries is primarily due to our region's many smaller, rural markets. The services provided by firms in this industry either are provided by regional hospitals or are provided by firms outside the East Central Region.

Notes on Recent Growth and Decline by Industry

Not only does the East Central Region have a relatively strong health care cluster but it is also getting stronger. Since 2004, ten cluster industries have seen varying degrees of strengthening. The most notable trends were seen in home health care services, vocational rehabilitation services, and medical equipment and supplies manufacturing. Societal trends have changed the way we care for our elderly and strengthened employment within the *home health care services* industry. First, it is becoming increasingly common for dual-income families to hire home health assistance for their elderly parents.[iv] Leslie Roth, a consultant with the East Central Regional Skills Alliance, notes, "in addition to trends favoring home health care over other alternatives, there are simply more elderly residents, creating more demand for home health care services. Together, these societal and demographic trends have helped the industry see double-digit job growth between 2004 and 2006.

Vocational rehabilitation services has grown and strengthened in the region. As mentioned above, one major reason for this relative strengthening is Michigan's current economic climate. Individuals who would ordinarily waive vocational rehabilitation services have been forced to consider these services due to the extremely competitive labor market and the necessity of working. Mike Shea, President of the Arnold Center, a Midland- and Gladwin- based vocational rehabilitation firm, notes that "another reason for this employment growth has been the ability of vocational rehabilitation facilities to provide employment for individuals with barriers, which creates more employment opportunities for support personnel."

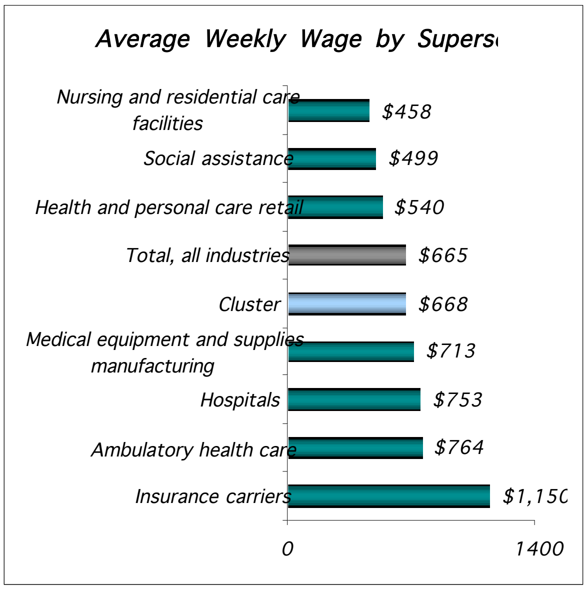
Finally, the *medical equipment and supplies manufacturing* industry has demonstrated recent strengthening in the East Central region. This "non-traditional" health care sector has added 200 jobs since 2004 and, today, represents 2 percent of total health care cluster employment. In part, the recent growth in this industry can be credited to our region's manufacturing competency and active collaboration. "The Saginaw area is a regional medical center with a history of advanced manufacturing, which are key advantages for the growth of the medical device industry," according to JoAnn T. Crary, president of Saginaw Future Inc. (SFI), a local economic development organization.

The only industries to show a weaker location quotient over the period were community care facilities for the elderly, offices of physicians, and outpatient care centers. The *community care facilities for the elderly* comprises establishments engaged in providing residential and personal care services for the elderly and other persons who are unable to care fully for themselves or who do not desire to live independently. Between 2004 and 2006, this industry lost 200 jobs locally but remained a relatively strong industry in our region. The recent weakening in this industry is not necessarily a negative reflection upon our region but, instead, a result of very positive trends elsewhere in the country. That is, the regional weakening is the result of very rapid growth in some other states. Nationally, between 2004 and 2006, this industry has seen growth of 50,000 jobs or 8.5 percent. The states with the most job growth are also states that are becoming increasingly popular retirement destinations, including Tennessee (14.6 percent job growth), South Carolina (14.5 percent), Maryland (12.5 percent), Texas (10.4 percent), North Carolina (8.9 percent), and Nevada (8.7 percent).[v]

Offices of physicians and *outpatient care centers* have seen similar job trends. These industries provide consumers with a variety of services ranging from routine office visits to ambulatory surgical and emergency services. Combined, these industries lost only 200 jobs (a 4 percent decline) between 2004 and 2006. Nevertheless, this is somewhat significant considering these same industries have seen 143,000 new jobs nationally, representing 5.7 percent growth. Regional growth in these industries is probably lagging behind national growth due, again, to our current economic conditions. As a traditional health care sector, consumer demand for services is to some extent based on consumer income and other considerations such as insurance. Another explanation for less regional growth in these two industries is our region's hospital presence. With a location quotient of 1.48 and nearly 35 percent of all cluster jobs, our region's hospitals are stronger locally than nationally. The presence of such large hospitals may lessen the demand for some of the services provided at physician's offices or at outpatient care centers.

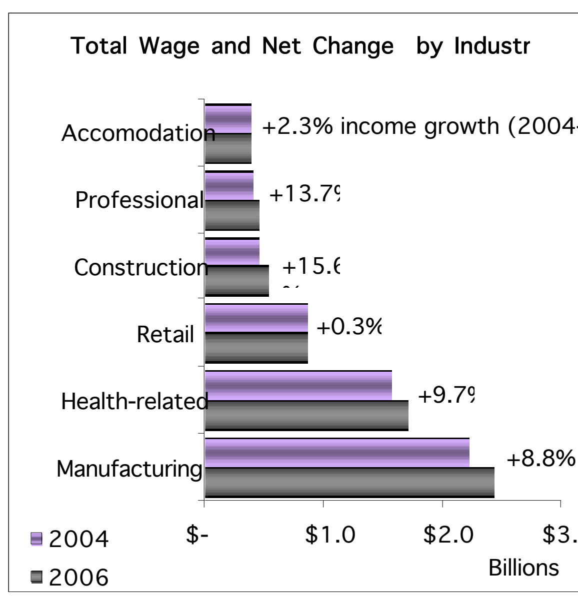
Wage Considerations

In 2006, the typical worker in the East Central health care cluster earned an average weekly wage of $668. This is on par with the region's cross-industry average weekly wage of $665. Statewide, however, average wages in both the health care cluster and across industries was higher, measuring at $806 and $810 respectively. Divided into seven sectors, 2006 regional wage estimates show that three sectors reported lower-than-average wages and four reported higher-than-average wages. The lowest average weekly wage ($458) was reported from *nursing and residential care facilities*. The primary reason for this relatively low wage was the concentration of lower paying occupations found in the industry; they include, nursing aides, orderlies, and attendants and maids and housekeeping cleaners. In contrast, *ambulatory health care* and *hospitals* reported the highest average weekly wages. These industries had a relatively high concentration of higher-paying occupations including registered nurses, and physicians and surgeons. The *insurance carriers* sector also reported a high average weekly wage of $1,150 with a number of well-paying occupations including claims adjusters and sales agents. Workers in many cluster industries saw their incomes increase between 2004 and 2006, as wages in the health care cluster increased by 4 percent. Over the period, only two subsectors saw average weekly wages decline, including *medical equipment and supplies manufacturing* (-5.8 percent) and *ambulatory health care* (-4.3 percent). Between 2004 and 2006, inflation in the United States was measured at roughly 7 percent.



Good News for the Health Care Cluster IS Good News for the Region

Since 2004, both employment opportunities and wages in the health care cluster have continued to show positive trends in the East Central Region. While this is good news for those directly involved in the cluster, it is also good news for the community. Total wage and salary income from all industries in the fifteen-county region was measured at $9.9 billion in 2004 and increased 3.3 percent to $10.3 billion by 2006. Over the same period, income generated in the health care cluster grew by 9.7 percent from $1.5 billion in 2004 to $1.7 billion in 2006. This suggests that health related industries and its workers are fairing relatively well



during a time of overall sluggish economic growth. It also suggests that new and existing workers in these industries are able to spend more money in the surrounding economy. According to economic theory, workers who earn a moderate wage – similar to wages paid in many health-related jobs – have a high propensity to consume. What does this mean to the surrounding economy? A large share of the $1.7 billion paid to workers in our health care cluster is being spent in and around the region helping to support and grow businesses in other industries.

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[i] Location quotient analysis compares the share of Michigan jobs in various health care cluster industries to the share nationally. A Location Quotient well above 1.0 indicates an above average concentration of jobs in that industry locally, and implies that the industry may be a base sector that partially exports products to other regions. A ratio well below 1.0 may indicate that local demand is not fully met by local production in that sector.

[ii] Between 2000 and 2006, the United States Census Bureau estimates that the East Central Region lost more than 8,000 residents to internal out-migration. However, several counties in the East Central Region have seen population growth due to internal in-migration including Lapeer (+3,000), Roscommon (+1,700), Gladwin (+1,200), Ogemaw (+600). Smaller internal in-migration trends were seen in Iosco, Clare, Arenac, and Isabella counties over the period. These gains from these nine counties were more than offset by large out-migration from Saginaw (-7,800), Bay (-2,600), Midland (-2,000), Tuscola (-1,100), and Huron (-1,100). Smaller internal out-migration was seen in Gratiot and Sanilac counties.

[iii] The *outpatient care center* industry includes family planning centers, outpatient mental health and substance abuse centers, and other outpatient care centers including HMO medical centers, kidney dialysis centers, and freestanding emergency medical centers.

[iv] Clark, Hannah (2007, March). "The fastest-growing jobs in the U.S.: As well-heeled baby boomers age, look to the health care industry." Forbes.com. Retrieved November 6, 2007, from MSNBC.com database.

[v] According to the bizjournal.com study entitled "Nation's Hottest Retirement Communities," Alpena County, Michigan was named one of Michigan's three communities to make the list. However, no place in Michigan was among the study's top ten retirement areas that represented communities in seven states including, Florida (3), Nevada (2), Tennessee, Texas, North Carolina, South Carolina, and Maryland.