

A Strategic Plan for the Potential Relocation of the Memorial Hospital at Easton

Submitted by:
Sage Policy Group, Inc.

Submitted to:
Talbot County

October 2007

Table of Contents

List of Exhibits.....	2
Executive Summary	3
Introduction.....	7
Scope of analysis.....	7
Analytical objective	8
The Analysis	9
Economic development contributions of Talbot County’s healthcare industry	9
The economic contributions of The Memorial Hospital at Easton	15
Healthcare occupations in Maryland	16
Measuring economic and fiscal impact: the economics of what’s at stake	22
Potential use of existing medical space and target industries available to backfill.....	25
Potential fiscal impacts from hospital relocation outside of Talbot County	26
Access to Care and Proximity.....	28
Demographics of Talbot County.....	28
Trends in hospital utilization	29
Proximity and access to care.....	31
An Easton location for the new hospital and supportive business services	33
Future research.....	33
Conclusion	34
Key findings.....	34
Implications.....	34

List of Exhibits

Exhibit E-1: Potential economic impacts of hospital relocation (dollars in millions)	5
Exhibit E-2: Potential loss of annual County income tax revenue (millions)	5
Exhibit 1: Map of study area	8
Exhibit 2: Healthcare sector geography, 2005.....	9
Exhibit 3: Healthcare as share of total economy	10
Exhibit 4: Multiplier effects of spending at hospitals and doctors' offices	11
Exhibit 5: Significance of transfer payments as personal income (dollars in millions)	12
Exhibit 6: Growth in transfer payments (dollars in millions).....	13
Exhibit 7: Concentration of healthcare sector in Easton near Memorial Hospital.....	15
Exhibit 8: Concentration of healthcare sector in Eastern Shore of Maryland counties	16
Exhibit 9: Most common healthcare occupations in Maryland.....	16
Exhibit 10: Sources of job growth in Maryland's healthcare sector	17
Exhibit 11: Maryland turnover rates for select positions: 2005 vs. 2006.....	18
Exhibit 12: Percent of U.S. hospitals reporting loss of specialty coverage in 2006.....	19
Exhibit 13: Reasons cited for loss of emergency specialty coverage in the past 24 months	19
Exhibit 14: Continuum of responses to address nurse retention	20
Exhibit 15: Nurse retention continuum	21
Exhibit 16: Graduate specialty choice	22
Exhibit 17: Estimated Talbot County jobs, income, and revenue for Memorial Hospital and offices of physicians with links to the hospital (dollars in millions).....	23
Exhibit 18: Potential economic impacts of hospital relocation (dollars in millions)	23
Exhibit 19: Healthcare offices proximate to Memorial Hospital at Easton.....	25
Exhibit 20: Potential loss of annual County income tax revenue.....	27
Exhibit 21: Projected population growth by Maryland region, 2005 through 2030.....	28
Exhibit 22: Median age by Maryland jurisdiction, 2006 estimates	29
Exhibit 23: Utilization of key Memorial Hospital services, FY2001 vs. FY2006	30
Exhibit 24: Map of potential medical center locations.....	32

A Strategic Plan for the Potential Relocation of the Memorial Hospital at Easton

Executive Summary

Background and Strategic Plan Objective

Talbot County, Maryland hired economic/policy consultancy Sage Policy Group, Inc. (Sage) of Baltimore to author a strategic plan intended to help policymakers determine the implications associated with the relocation of key Memorial Hospital at Easton (Memorial Hospital) functions and to identify appropriate policy responses. In the process of developing the strategic plan, Sage generated estimates of economic and fiscal impacts associated with potential relocation. To conduct this part of the strategic planning Sage relied heavily upon publicly available data, standard economic multipliers, and published tax rates. Sage also focused upon the health related implications of a relocation, including by analyzing county demographics.

The matter stems from the 2006 acquisition of Shore Health System by the University of Maryland Medical System (UMMS). UMMS intends to construct a new hospital on Maryland's Upper Eastern Shore which would encompass certain services currently provided at Memorial Hospital. Location of the new medical center is yet undetermined, but there is a possibility that the hospital will be developed in neighboring Queen Anne's County, roughly 13 miles from Memorial Hospital, under a reasonably possible scenario. Presumably, this relocation is being contemplated so that UMMS can enjoy greater proximity to more rapidly growing communities abutting Maryland's Western Shore.

This strategic plan is intended to provide Talbot County decision-makers with the data and information required to best protect the interests of the community they serve. These interests take on both medical and economic dimensions.

Key Findings

- Data confirm that healthcare represents a centrally important part of Talbot County's economy. In 2005, over 2,700 people were employed by the local healthcare sector and collectively earned \$105 million in wages. Wages averaged \$742 per worker per week. An estimated 130 different business locations provided healthcare goods and services in that year, most tied directly to Memorial Hospital.
- For each \$1.00 of income earned by Memorial Hospital employees, an additional \$0.45 is earned by other workers in the county. For each \$1.00 of sales or revenue generated by Memorial Hospital, an additional \$0.63 of sales is generated for other Talbot County businesses.
- While medical transfer payments represent a relatively small share of personal income, they are increasing at a faster rate than the rate for total personal income.

In other words, medical transfer payments are becoming more important as a personal income source. This is, in part, a reflection of an aging population that consumes an increasing number and volume of medical services and that relies on Medicare to pay for medical expenses. From 1995 to 2005, medical transfer payments increased 112 percent in Talbot County, a rate slightly higher than medical payments in Maryland and much higher than the overall rate of increase in personal income.

- Healthcare employment in the 21601 zip code (Easton) constitutes almost one-fifth of that zip code's total employment. Healthcare workers earn almost \$1 of every \$4 earned by all workers and earn on average over 20 percent more. Healthcare establishments in the 21601 zip code represent 11 percent of the zip code's total business establishments.

Implications

In considering economic losses from a relocation of Memorial Hospital or important elements thereof, the key question is how much economic activity will move from Talbot County to another county or counties. Given the evidence from most Eastern Shore counties and other experiences, the following outcomes are likely:

- Other healthcare establishments will relocate near the new hospital. In the short-term, physicians may be the first to relocate offices. In the longer term, however, there is a high probability that many other providers and establishments will move;
- The hospital's supply chain will become less connected to Talbot County and more diffused;
- Medical transfer payments previously entering the Talbot County economy will be diverted to other counties;
- Talbot County may have more difficulty attracting and retaining businesses and retirees;
- The locus of activity for Talbot County's healthcare sector will move from Easton to the new hospital location; and
- Those most likely to be affected from the perspective of employment opportunities will be individuals of low to moderate skills and pay.

For patients, facility relocation will entail longer absences from work, greater inconvenience to family members, higher use of gasoline, and perhaps fewer trips to physician offices to acquire preventative care. For physicians, relocation will entail greater distance from traditional patient bases. For the Talbot County taxpayer, the relocation of hospital activities will result in lower income tax collections and potentially less property tax collections from impacted businesses and neighborhoods. For many workers, the relocation of hospital activities will require longer commutes on average.

Exhibit E-1 provides estimates of that loss on an annual basis for a range of possibilities. The low end of this range is that 20 percent of the economic activity associated with the hospital leaves Talbot County; the high end is that all economic activity related to the hospital and these doctors' offices leaves. In between these extremes are increments of 20 percentage points.

Exhibit E-1: Potential economic impacts of hospital relocation (dollars in millions)

<i>Degree of loss</i>	<i>Hospitals</i>			<i>Physician offices</i>			<i>Total</i>		
	Jobs	Income	Revenue	Jobs	Income	Revenue	Jobs	Income	Revenue
20%	239	\$10.3	\$25.3	211	\$11.3	\$22.2	450	\$21.6	\$47.6
40%	478	\$20.6	\$50.7	421	\$22.7	\$44.5	899	\$43.3	\$95.2
60%	717	\$30.9	\$76.0	632	\$34.0	\$66.7	1,349	\$64.9	\$142.8
80%	956	\$41.2	\$101.4	842	\$45.3	\$89.0	1,799	\$86.6	\$190.3
100%	1,196	\$51.6	\$126.7	1,053	\$56.7	\$111.2	2,248	\$108.2	\$237.9

In the unlikely event that all current hospital economic activity and all activity associated with these doctors' offices left the county, the total economic loss is estimated at over 2,200 jobs, \$108 million in income, and \$238 million in revenue/business sales. This represents 11 percent of Talbot County jobs and 17 percent of its income.

These jobs and other economic benefits would not disappear, but would migrate to other areas of the Eastern Shore. One possibility—unlikely and extreme—is that with respect to the healthcare sector, Talbot County and Queen Anne's County would exchange places. Queen Anne's County possesses a limited healthcare sector, but could be a major beneficiary over the longer term if it becomes the site of a major regional medical center.

Loss of income translates into loss of County income tax revenue. This loss would depend in large part on healthcare workers choosing to move from Talbot County; a consequence of the relocation of the hospital or relocation of doctors' offices. Such moves may be more unlikely than the relocation of healthcare facilities and offices. Nevertheless, some relocation is likely, especially in the longer term. Exhibit E-2 estimates the loss in County income tax receipts if the hospital and employees of doctors' offices move from Talbot County. As with Exhibit E-1, this loss includes the multiplier effect and is shown in five 20-percentage point increments. Lost annual County income tax receipts range from \$0.4 million to \$2.2 million. The \$2.2 million figure represents 3 percent of Talbot County's general fund revenues.

Exhibit E-2: Potential loss of annual county income tax revenue (millions)

<i>Degree of loss</i>	<i>Hospitals</i>	<i>Offices of physicians</i>	<i>Total</i>
20%	\$0.3	\$0.2	\$0.4
40%	\$0.5	\$0.4	\$0.9
60%	\$0.8	\$0.6	\$1.3
80%	\$1.0	\$0.8	\$1.8
100%	\$1.3	\$0.9	\$2.2

Final Word

Talbot County faces serious losses in economic vitality and quality of life should a significant portion of activities be shifted from Memorial Hospital. This strategic plan has quantified the magnitude of the potential harm and has also provided policymakers with guidance related to prioritization of those medical services that are most important to retain within the community given considerations of county demographics and requirements for proximity. These include medical services used most intensely by the elderly, emergency care, and those that relate to chronic conditions such as diabetes and renal failure. The fiscal impact estimates generated by this report should also help policymakers determine the magnitude of resources worth investing to retain current hospital operations or available to invest in securing the new hospital's location.

Introduction

Talbot County, Maryland hired economic/policy consultancy Sage Policy Group, Inc. (Sage) of Baltimore to author a strategic plan intended to help policymakers determine the implications associated with the relocation of key Memorial Hospital at Easton (Memorial) functions and to identify appropriate policy responses. In the process of developing the strategic plan, Sage generated estimates of economic and fiscal impacts associated with potential relocation. To conduct this part of the strategic planning Sage relied heavily upon publicly available data, standard economic multipliers, and published tax rates. Sage also focused upon the health related implications of a relocation, including by analyzing county demographics.

The matter is of no small consequence. The Memorial Hospital at Easton is the largest employer in both town and county. Its importance symbolically has grown after the recent loss of Black & Decker as a signature county employer.

As a provider of healthcare services, the hospital represents a counterweight to persistent underemployment and a source of stability for the local economy. As this report will detail, the hospital represents a significant source of personal income, is a magnet for downtown business activity and is centrally important in the delivery of both acute and ambulatory care.

This is particularly important in the context of regional demographics. Talbot, Kent and Dorchester counties rank first, third and fifth among Maryland's 24 jurisdictions, respectively, in terms of the proportion of residents aged 65 and older. The hospital also provides proximate access to Talbot County's low-income population. In 2005, 27 percent of the county's households reported incomes less than \$25,000. The corresponding proportion in Maryland is 20 percent.

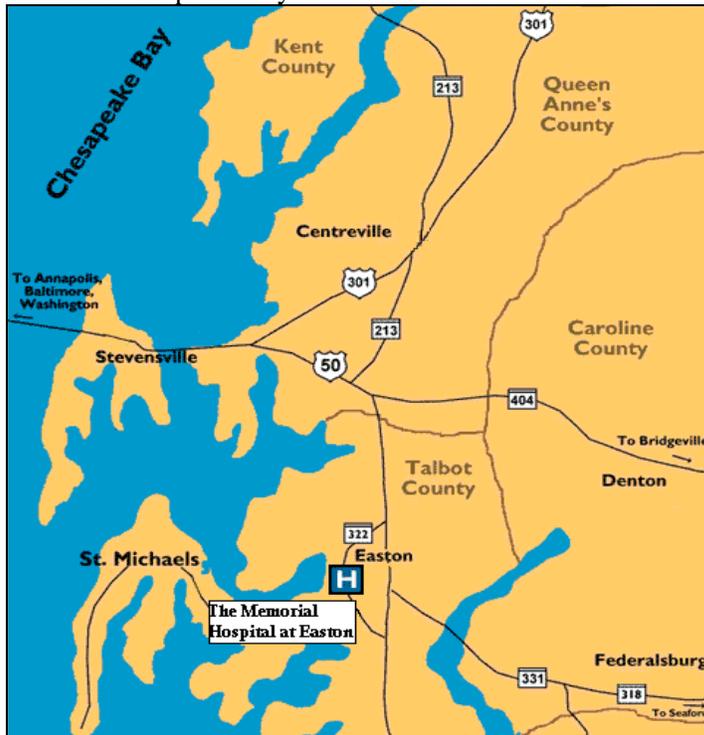
Scope of analysis

Rarely does an analyst or group of analysts encounter an entity that is critically important both as an economic driver and as a quality of life amenity. However, hospitals often serve dual roles as engines of job creation and income formation and as providers of care. Fulfillment of these twin roles is typically more important in rural settings, where medical centers are often one of the few proximate places from which to obtain needed treatment and are among the largest employers.

When rural hospitals close, the economic consequences are clear and deleterious. In the present instance, the impacts will be considerably more nuanced and less certain because the issue revolves around the potential relocation of certain hospital functions (perhaps to a neighboring county) as opposed to hospital closure, and because care will still be provided within the general vicinity. Nonetheless, the county is faced with significant losses to the strength of its economic base and to the availability of much-needed, easily accessible care.

The matter stems from the 2006 acquisition of Shore Health System by the University of Maryland Medical System (UMMS). UMMS intends to construct a new hospital on Maryland's Upper Eastern Shore which would encompass certain services currently provided at Memorial Hospital. Location of the new medical center is undetermined, but there is a possibility that the hospital will be developed in neighboring Queen Anne's County, roughly 13 miles from Memorial Hospital, under a reasonably possible scenario.

Exhibit 1: Map of study area



Source: Shore Health System

Analytical objective

This strategic plan is intended to provide Talbot County policymakers with the data and information required to best protect community interests. These interests take on both medical and economic dimensions. As such, the strategic plan is divided into two sections. The first focuses upon the potential losses to the community from the loss of Memorial Hospital as a key economic driver. The second portion focuses upon those medical services offered by the hospital that are most important for the community to salvage given its demographics and requirements for proximity/accessibility.

The future remains uncertain, except that to some degree, the healthcare sector is likely to become less central to Talbot County's economy and that Easton and other county residents may have to travel greater distances to access the services they require. The estimation of economic and fiscal impacts is conditional, a consequence of remaining uncertainties. As the location of future hospital activities becomes more transparent, the impacts will also become clearer.

The Analysis

Economic development contributions of Talbot County's healthcare industry

Simply stated, Memorial Hospital represents a vital part of Talbot County's economy. The healthcare industry generally provides a variety of economic development benefits, and because Talbot County is home to a relatively substantial healthcare infrastructure, a greater proportion of healthcare dollars remain within the community. The healthcare sector has also historically helped the county attract dollars into its economy. As a quality of life mainstay, the hospital has played a key role in attracting and retaining businesses and population. Finally, the healthcare industry helps to promote a healthy workforce, thereby benefiting all county businesses and institutions.

- The relative importance of healthcare to Talbot County's economy

Data confirm that healthcare represents a centrally important part of Talbot County's economy. In 2005, over 2,700 people were employed by the local sector and collectively earned \$105 million in wages. Wages averaged \$742 per worker per week. An estimated 130 different business locations provided healthcare goods and services in that year, most tied directly to Memorial Hospital.

In absolute terms, the healthcare sector employment and payroll in Talbot County ranked third among all counties on the Eastern Shore, including Cecil County. Only Wicomico County had more healthcare establishments than Talbot County. Exhibit 2 lists employment, payroll, average weekly wage, and establishments for the healthcare sector in all Eastern Shore counties.

Exhibit 2: Healthcare sector geography, 2005 (1)

Jurisdiction	Employment	Payroll (millions)	Average weekly wage	Establishments (2)
Maryland	257,750	\$11,232	\$838	11,550
Talbot County	2,727	\$105	\$742	130
Queen Anne's County	441	\$14	\$627	48
Caroline County	507	\$15	\$551	23
Dorchester County	1,438	\$53	\$703	65
Cecil County	5,274	\$302	\$1,101	125
Kent County	1,297	\$46	\$679	52
Somerset County	672	\$17	\$491	29
Wicomico County	6,781	\$294	\$834	244
Worcester County	1,382	\$45	\$621	88

Notes. (1) Healthcare sector is defined as NAICS codes 621, 622, 623; that is, ambulatory healthcare services, hospitals, and nursing and residential care facilities.
(2) Maryland data from Maryland Department of Labor, Licensing, and Regulation; county data from U.S Census Bureau.
Sources: US Census Bureau, County Business Patterns, Zip Code Business Patterns, Maryland Department of Labor, Licensing, and Regulation "Health" April 2007

The importance of healthcare to the county’s economy becomes even more apparent when one compares healthcare sector characteristics to those of Talbot County’s overall economy. As shown in Exhibit 3, healthcare accounts for almost 16 percent of county employment, over 19 percent of county payroll and 8 percent of all county business establishments. Moreover, average healthcare wages are substantially higher than the average county wage.

In relative terms, healthcare is more important to Talbot County’s economy than it is to Maryland’s economy, accounting for a larger share of employment and payroll (Exhibit 3). That is astonishing given Maryland’s global reputation as a center of health service and research concentration. Average weekly wages for the healthcare sector in Maryland are 106 percent of all average weekly wages compared to 124 percent in Talbot County. In other words, the healthcare sector disproportionately contributes to support for middle and higher income households in Talbot County.

Exhibit 3: Healthcare as share of total economy

Jurisdiction	Employment	Payroll (millions)	Average weekly wage	Establishments (2)
Maryland	11.9%	12.6%	106.2%	8.3%
Talbot County	15.6%	19.3%	123.8%	8.1%
Queen Anne's County	3.9%	4.4%	112.5%	3.4%
Caroline County	7.1%	7.3%	102.8%	3.3%
Dorchester County	14.0%	18.6%	132.6%	8.1%
Cecil County	22.7%	36.2%	159.1%	6.8%
Kent County	17.6%	22.3%	127.1%	7.1%
Somerset County	17.3%	14.8%	85.6%	7.2%
Wicomico County	16.7%	23.4%	140.0%	9.0%
Worcester County	7.6%	8.8%	115.6%	3.9%

Notes. (1) Healthcare sector is defined as NAICS codes 621, 622, 623
(2) Maryland data from Maryland Department of Labor, Licensing, and Regulation; county data from U.S Census Bureau.
Sources: US Census Bureau, County Business Patterns, Zip Code Business Patterns, Maryland Department of Labor, Licensing, and Regulation "Health" April 2007

Healthcare is not always as prominent a part of local economies on the Eastern Shore as it is in Talbot County. Queen Anne’s County, one of two Eastern Shore counties without a hospital, is the most glaring exception, where healthcare represents a relatively small share of the county’s employment, payroll and business establishments. Caroline County, the other Eastern Shore county without a hospital, also has relatively little employment or payroll and fewer business establishments in the healthcare sector compared to the other Eastern Shore counties or to Maryland.

Worcester County, another county with relatively little healthcare employment, has a hospital, although Atlantic General in Berlin is one of the state’s smallest hospitals (50 to 99 beds) and the county has one of the lowest numbers of total hospital beds on the Eastern Shore. These statistics may provide Talbot County policymakers with some

sense of what the future might look like were Memorial Hospital shrunk substantially in the years ahead.

- Quantifying the economic contributions of Talbot County’s healthcare sector

As stated earlier, one important consequence of the relative prominence of the healthcare sector in Talbot County is the tendency for healthcare dollars spent in the county to stay in the county’s economy. One measure of this is the so-called multiplier effect, which estimates the additional business sales, employment or income that is created when money is spent at Memorial Hospital or at a Talbot County doctor’s or dentist’s office. Additional business is created when, for example, Memorial Hospital uses part of its revenues to purchase goods and services from other Talbot County establishments, and these establishments, in turn, purchase goods and services from other in-county establishments. A final part of the multiplier effect is created when hospital employees and employees at establishments in the hospital’s supply chain purchase consumer goods within Talbot County.

Exhibit 4 lists multiplier effects for jobs, income, or revenue/business sales (i.e., healthcare spending) at hospitals and doctors’ offices for Maryland and for the counties of the Eastern Shore. As expected, the multiplier effect is highest for Maryland because the supply chain for hospitals and doctors’ offices is more complex and elaborate at the state level than at the county level. Among counties on the Eastern Shore, however, only Wicomico County has greater multiplier effects for hospitals and doctors’ offices than does Talbot County.

The values listed in Exhibit 4 include the jobs, income, and sales/revenues of the hospitals or doctors’ offices themselves. For example, the 1.65 multiplier effect for Talbot County hospital jobs means that for each job at the hospital, an additional 0.65 job is created in the county. For each \$1.00 of income earned by Memorial Hospital employees, an additional \$0.45 is earned by other workers in the county. For each \$1 of sales or revenue generated by Memorial Hospital, an additional \$0.63 of sales is generated for other Talbot County businesses.

Exhibit 4: Multiplier effects of spending at hospitals and doctors’ offices

<i>Jurisdiction</i>	<i>Hospitals</i>			<i>Doctors’ offices</i>		
	Jobs	Income	Sales	Jobs	Income	Sales
Maryland	2.09	1.85	1.91	1.68	1.44	1.74
Talbot County	1.65	1.45	1.63	1.63	1.31	1.58
Queen Anne’s County	N.A.	N.A.	N.A.	1.36	1.22	1.43
Caroline County	N.A.	N.A.	N.A.	1.33	1.16	1.34
Dorchester County	1.40	1.25	1.35	1.32	1.19	1.37
Cecil County	1.49	1.33	1.45	1.46	1.25	1.45
Kent County	1.48	1.29	1.40	1.38	1.21	1.39
Somerset County	1.26	1.21	1.27	1.25	1.14	1.29
Wicomico County	1.67	1.46	1.67	1.75	1.34	1.64
Worcester County	1.46	1.30	1.47	1.36	1.22	1.44

Source: IMPLAN

- Attracting external dollars to the local economy

One key feature of medical care is the federal government’s role in paying for elder care and care for the indigent through transfer payments. For Talbot County’s economy, these transfer payments amount to new income attracted to the county through the healthcare sector.

From an analytical perspective, transfer payments are considered a part of the personal income that supports economic life in Talbot County. Exhibit 5 presents the major components of personal income for the county and Maryland over the past decade. There are three major components—earned income, unearned income, and transfer payments. Exhibit 5 also shows the two largest components of transfer payments—retirement and similar benefits (all Social Security payments) and medical benefits (Medicare, Medicaid, and military medical benefits).

Exhibit 5: Significance of transfer payments as personal income (dollars in millions)

<i>Location and type of personal income</i>	<i>Value of income</i>			<i>Share of total</i>		
	<i>1995</i>	<i>2000</i>	<i>2005</i>	<i>1995</i>	<i>2000</i>	<i>2005</i>
Talbot County						
Total personal income	\$948	\$1,287	\$1,813	100.0%	100.0%	100.0%
Net earnings by place of residence	\$473	\$672	\$864	49.9%	52.2%	47.7%
Dividends, interest, and rent	\$352	\$458	\$715	37.2%	35.6%	39.4%
Personal current transfer receipts	\$123	\$157	\$234	13.0%	12.2%	12.9%
• Retirement, disability insurance benefits	\$62	\$78	\$111	6.5%	6.0%	6.1%
• Medical benefits	\$45	\$57	\$95	4.7%	4.4%	5.2%
Maryland						
Total personal income	\$133,814	\$181,957	\$234,609	100.0%	100.0%	100.0%
Net earnings by place of residence	\$95,320	\$130,715	\$170,773	71.2%	71.8%	72.8%
Dividends, interest, and rent	\$24,048	\$32,998	\$37,863	18.0%	18.1%	16.1%
Personal current transfer receipts	\$14,446	\$18,245	\$25,973	10.8%	10.0%	11.1%
• Retirement, disability insurance benefits	\$5,755	\$7,045	\$9,241	4.3%	3.9%	3.9%
• Medical benefits	\$5,733	\$7,499	\$12,002	4.3%	4.1%	5.1%

In Talbot County, not quite half of total personal income is derived from wages and other earnings and another two-fifths is derived from dividends, interest, and rent (unearned income). The remaining personal income is derived from transfer payments, which amount to approximately one-eighth of all personal income in Talbot County.

The comparison of Talbot County personal income sources with those statewide is interesting. The county is clearly more reliant on unearned income, which has much to

do with Talbot County’s older age profile (more detail regarding this in the strategic plan’s second part). Maryland derives a slightly smaller share of personal income from transfer payments than does the county. Both the state and county, however, derive just over 5 percent of personal income from medical transfer payments.

While medical transfer payments represent a relatively small share of personal income, they are increasing at a faster rate than the rate for total personal income. In other words, medical transfer payments are becoming more important as a personal income source. This is, in part, a reflection of an aging population that consumes an increasing number and volume of medical services and that relies on Medicare to pay for medical expenses. From 1995 to 2005, medical transfer payments increased 112 percent in Talbot County, a rate slightly higher than medical payments in Maryland and much higher than the overall rate of increase in personal income. Presently, many of these external resources are being spent within the county, but that would change to the extent to which the county lacks the healthcare infrastructure going forward to serve its population.

Exhibit 6: Growth in transfer payments (dollars in millions)

<i>Location and type of personal income</i>	1995	2000	2005	<i>Change 1995-2005</i>	
				Value	Percent
Talbot County					
Total personal income	\$948	\$1,287	\$1,813	\$865	91.2%
Personal current transfer receipts	\$123	\$157	\$234	\$111	90.2%
• Retirement, disability insurance benefits	\$62	\$78	\$111	\$49	79.8%
• Medical benefits	\$45	\$57	\$95	\$50	112.2%
Maryland					
Total personal income	\$133,814	\$181,957	\$234,609	\$100,795	75.3%
Personal current transfer receipts	\$14,446	\$18,245	\$25,973	\$11,527	79.8%
• Retirement, disability insurance benefits	\$5,755	\$7,045	\$9,241	\$3,486	60.6%
• Medical benefits	\$5,733	\$7,499	\$12,002	\$6,269	109.3%

- Attracting and retaining local industry and retirees

Quality and accessibility of healthcare are critical quality of life factors that drive site selection among businesses and individual retirement location decisions. The ability to attract, retain and nurture existing businesses is critical to any community’s economic health, and as the most visible supplier of healthcare services, the local hospital plays an especially important site selection/marketing role.

The significance of hospitals to economic vitality and growth can be viewed through analyses of rural counties that suffer hospital closure. A study of 108 rural hospital closures in the 1980s concluded that employment and income growth grew at a somewhat lower rate after these closures than would have occurred without the closures. Reasons for such reductions in employment may include the fact that hospitals employ proportionately more African-Americans and women, and that after closure, low-skilled

workers find it more difficult to secure new employment.¹ If closed hospitals were converted to nursing homes or smaller limited service hospitals, however, negative economic impacts on the community tended to be mitigated.²

Talbot County is home to a significant number of retirees. For older Americans, access to a hospital is a significant determinant of where to retire. The importance of retirees to the county's economy can be seen in the contribution that Social Security transfer payments make to the county's total personal income. As shown in Exhibit 5, these payments constitute 6 percent of the county's total personal income compared to approximately 4 percent for Maryland. Although these payments are growing at a slower rate than medical transfer payments, the county's rate of increase for retirement-related transfer payments is substantially higher than the statewide average, another indication of the importance of retirees to Talbot County (Exhibit 6).

Retirees are more likely to choose a location of residence that has access to quality healthcare. In Maryland, as the elderly population is expected to grow 33 percent by 2015, the demand for accessible healthcare will be a determinant of their desire to relocate. Also, as a significant number of elderly citizens use public programs to supplement their healthcare purchases, Medicaid and Medicare are becoming a growing revenue source for the healthcare industry.

The Congressional Budget Office projects that Medicaid expenditures for seniors will grow at an average rate of 8.9 percent each year from 2002 to 2012, while Medicare expenditures are projected grow an average of 6.7 percent annually.³ In addition, recent data indicate that 66 percent of medical expenses for those over the age of 65 are paid by public programs (mainly Medicaid and Medicare).⁴ The relocation of these individuals, already evidenced to be significant, will not only bring additional tax receipts to the county for goods purchased, but also for healthcare services purchased; additional revenue to Memorial Hospital means additional revenue for Talbot County. Ultimately, Talbot County is in a position where it must educate its healthcare community of this growing demographic as any relocation of the hospital outside of Easton's town limits is likely to have a direct effect on future revenue. This fact is based not only on retirees' desire to have immediate access to healthcare but also by the medical coverage they bring with them.

Economically, the Social Security income of retirees represents another category of external dollars brought into the county, in part because of the presence of Memorial Hospital. Social Security, of course, is only one source of retirement income. In addition, retirees import income from pensions, IRAs, 401-K plans, and other sources. These external dollars further support Talbot County's economy.

¹ Hernandez, S. Robert and Arnold D. Kaluzny, "Hospital closure: a review of current and proposed research," *Health Services Research* 18:3, p. 429.

² Stensland, Jeffrey, "An Analysis of the Financial Conditions of Health Care Institutions in the Appalachian Region and their Economic Impacts," December 2002.

³ The Medicaid-Medicare Link: State Medicaid Programs are Shouldering a Greater Share of the Costs of Care for Seniors and People with Disabilities, February 2, 2003.

⁴ Medical Daily News, February 2004.

- Promoting a healthy workforce

Businesses obviously benefit from a healthy workforce. Moreover, workforce satisfaction is closely related to healthcare access. A recent Employee Benefit Research Institute survey found that workers rank health insurance as the most important benefit they receive by a margin of more than three to one.

The economic contributions of The Memorial Hospital at Easton

Discussing the healthcare sector as a component of the Talbot County economy obscures the fact that almost all of this economic activity occurs in Easton’s zip code (21601). Based on U.S. Census data regarding establishments and employment, an estimated 98 percent of the county’s healthcare employees, including those at the hospital, work in Easton. Please see Exhibit 7.

Exhibit 7: Concentration of healthcare sector in Easton near Memorial Hospital

<i>Economic characteristic</i>	<i>Talbot County</i>	<i>Zip code 21601 in Easton</i>	<i>Zip code 21601 in Easton as share of Talbot County</i>
Healthcare employment	2,727	2,676	98.1%
Payroll (millions)	105	103	98.1%
Average weekly wage	742	742	100.0%
Establishments	130	122	93.8%

Sources: US Census Bureau, County Business Patterns, Zip Code Business Patterns, Maryland Department of Labor, Licensing, and Regulation , “Health,” April 2007, Sage

Healthcare employment in the 21601 zip code constitutes almost one-fifth of that zip code’s total employment. Healthcare workers earn almost \$1 of every \$4 earned by all workers and earn on average over 20 percent more. Healthcare establishments in the 21601 zip code represent 11 percent of the zip code’s total business establishments.

The tendency for healthcare workers and healthcare establishments to locate within close proximity to a significant hospital is hardly unique to Easton and Talbot County. Exhibit 8 provides the percentage of healthcare establishments located in the same zip code as their hospital(s) for all Eastern Shore counties that have hospitals. Only in Somerset County, which has the smallest healthcare sector of any of these counties, are fewer than half the healthcare establishments located near the hospital. In three of the seven counties, including Talbot County, over 90 percent of healthcare establishments are in the hospital's zip code.

Exhibit 8: Concentration of healthcare sector in Eastern Shore of Maryland counties

Jurisdiction	Hospital town	Hospital zip code	Healthcare establishments in that zip code	Zip code establishments as share of all county healthcare establishments
Talbot County	Easton	21601	122	93.8%
Dorchester County	Cambridge	21613	59	90.8%
Cecil County	Elkton	21921	83	66.4%
Kent County	Chestertown	21620	52	100.0%
Somerset County	Crisfield	21817	9	31.0%
Wicomico County	Salisbury	21801	132	54.1%
Worcester County	Berlin	21811	48	54.5%

Notes. (1) Healthcare sector is defined as NAICS codes 621, 622, 623
(2) Maryland data from Maryland Department of Labor, Licensing, and Regulation; county data from U.S Census Bureau.
Sources: US Census Bureau, County Business Patterns, Zip Code Business Patterns, Maryland Department of Labor, Licensing, and Regulation "Health" April 2007

Healthcare occupations in Maryland

While the image of the healthcare sector is probably rooted in doctors and nurses, this sector in fact comprises a wide range of workers and occupational categories. Many of them support, but do not deliver, medical services.

The Maryland Department of Labor, Licensing, and Regulation collects information regarding healthcare occupations. Exhibit 9 lists the most common healthcare occupations in Maryland in 2004 and their share of total healthcare employment. Each occupation's estimated median (or typical) wages in 2006 are also listed. Registered nurses are the most common occupation by a significant margin and, with typical wages approaching \$70,000 in 2006, are well-paid relative to other occupations throughout the economy, though not necessarily relative to their stress levels. Seven of the top nine most common occupations have a median wage less than \$29,000. Maids and housecleaning staff report median wages of \$19,000.

Exhibit 9: Most common healthcare occupations in Maryland

Rank	Occupation	Share of healthcare employment, 2004	Median wages, 2006
1	Registered nurse	15.5%	\$69,839
2	Nursing aides, orderlies, attendants	9.4%	\$25,784
3	Home health aides	3.9%	\$21,289
4	Receptionists, information clerks	3.8%	\$24,836
5	General office clerks	3.1%	\$26,550
6	Licensed practical nurses	3.1%	\$45,828
7	Medical assistants	2.9%	\$27,540
8	Medical secretaries	2.6%	\$28,192
9	Maids, housekeeping cleaners	2.1%	\$19,008
Top 9 total		46.5%	--

Source: Maryland Department of Labor, Licensing, and Regulation "Health" April 2007

The majority of those in the healthcare sector are in occupations requiring low to moderate skill levels. Although many registered nurses hold bachelors or more advanced degrees, a four-year degree is not required. None of the other top nine healthcare occupations requires a four-year degree.

The future of healthcare occupations will likely see an even greater share of low to moderate skill and income occupations. As indicated in Exhibit 10, seven of the top ten healthcare occupations expected to have the greatest absolute increase in future employment opportunities typically earn less than \$28,000.

Exhibit 10: Sources of job growth in Maryland's healthcare sector

<i>Rank</i>	<i>Occupation</i>	<i>Employment increase, 2004-2014</i>	<i>Median wages, 2006</i>
1	Registered nurse	11,074	\$69,839
2	Home health aides	5,714	\$21,289
3	Nursing aides, orderlies, attendants	5,699	\$25,784
4	Medical assistants	3,037	\$27,540
5	Receptionists, information clerks	2,212	\$24,836
6	Dental assistants	1,665	\$32,597
7	Licensed practical & vocational nurses	1,469	\$45,828
8	Maids, housekeeping cleaners	1,253	\$19,008
9	General office clerks	1,063	\$26,550
10	Personal, home care aides	1,058	\$20,447

Source: Maryland Department of Labor, Licensing, and Regulation "Health" April 2007

The impact of prospective relocation will fall primarily on the occupations listed in Exhibits 9 and 10. While doctors and nurses will be best able to respond to the changes required by relocation, other workers may have fewer resources (e.g., private vehicles) and will face greater challenges and therefore greater prospects of economic harm.

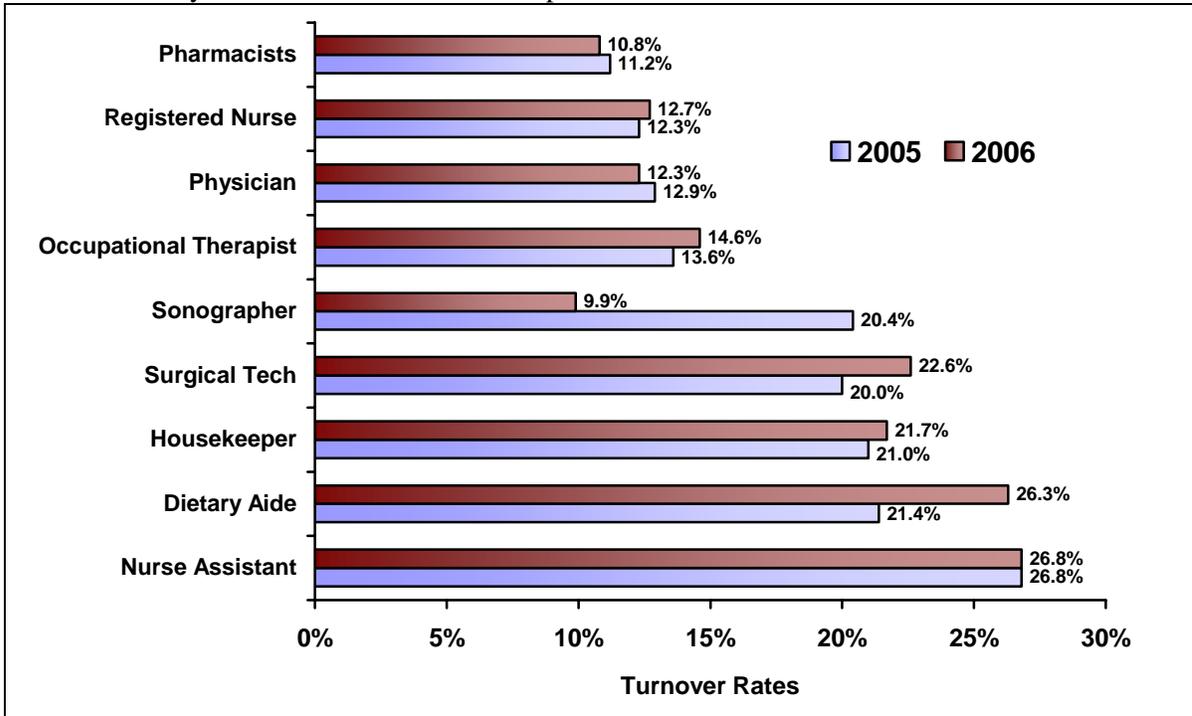
From the perspective of workforce development as it relates to the healthcare sector, the county's focus must be to produce graduates who are motivated, committed to community well being, and with a capacity to learn. It is likely that higher level occupations will be filled by those who receive post-secondary training elsewhere, but would choose to relocate/return to the community because of an elevated quality of life.

- Attracting a healthcare workforce

As with many industries, employers are finding it increasingly difficult to properly staff enterprises. This is even more true in healthcare given rapid increases in demand for services and the elevated training requirements associated with many occupations. These labor force issues may be even more serious in rural communities. Therefore, as part of the strategic plan, it is important for policymakers and hospital managers to consider the various approaches that can be adopted to promote retention and recruitment of key personnel. Unfilled jobs, of course, generate little to no economic impact and compromise quality of care.

Rampant turnover can also generate adverse consequences. According to the Maryland Hospital Association’s most recent Hospital Personnel Survey (2006), Maryland’s hospital-wide turnover averaged 16.7 percent (up from 15.5% in 2005). Among the forty specifically-surveyed positions, the number with turnover rates above 10 percent increased from 32 of 40 in 2005 to 34 of 40 in 2006. A few positions such as cytotechnologists and respiratory therapists have remained consistently below the 10 percent turnover mark.⁵ Exhibit 11 highlights select positions with significant turnover.

Exhibit 11: Maryland turnover rates for select positions: 2005 vs. 2006



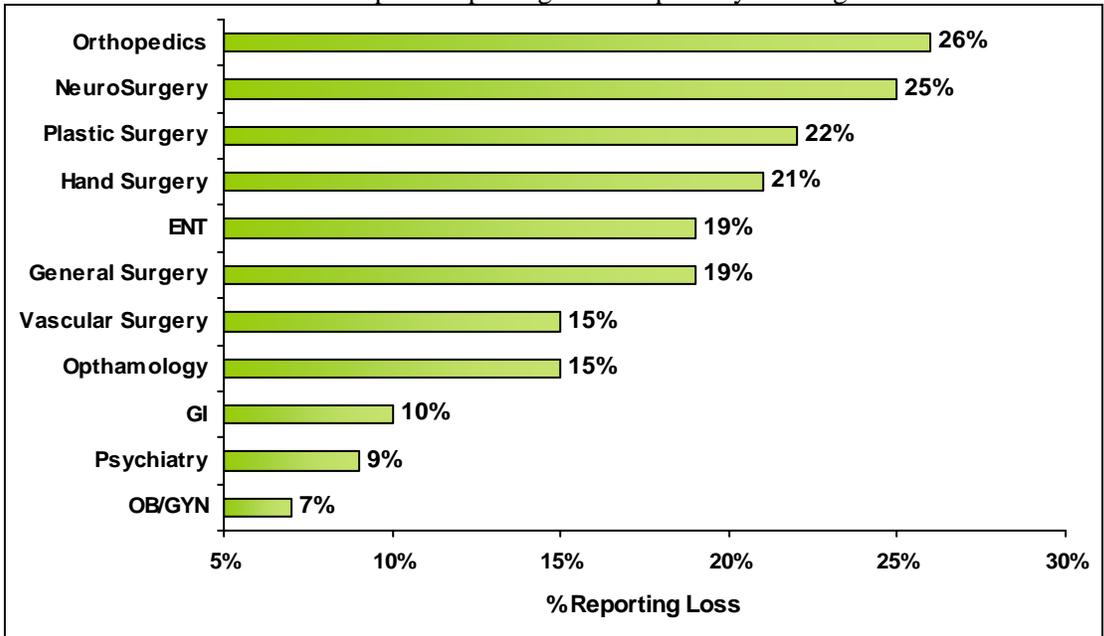
Source: Maryland Hospital Association

The American Hospital Association reports that 55 percent of community hospitals have experienced gaps in their specialty coverage in the Emergency Department over the last 24 months.⁶ Exhibit 12 depicts the gaps in coverage by specialty prevalence.

⁵ Maryland Hospital Association. Hospital Personnel Survey. Calendar Year 2006. Released August 2007.

⁶ American Hospital Association. The 2007 State of American Hospitals: Taking the Pulse.

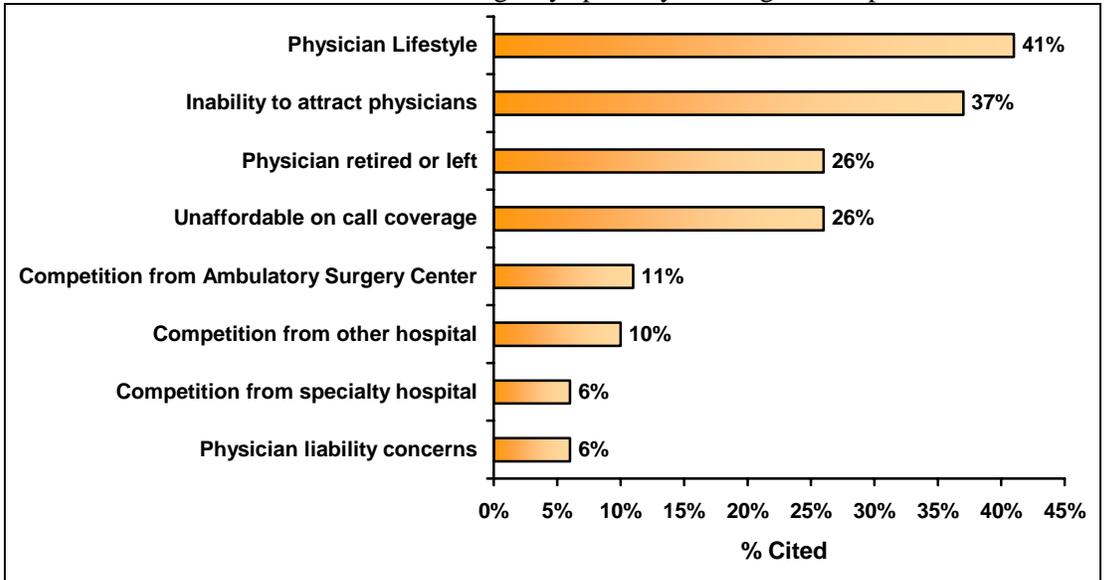
Exhibit 12: Percent of U.S. hospitals reporting loss of specialty coverage in 2006



Source: American Hospital Association

Exhibit 13 highlights primary causal factors, including physician lifestyle, inability to attract physicians, physician retirement, and unaffordable on-call coverage.

Exhibit 13: Reasons cited for loss of emergency specialty coverage in the past 24 months



Source: The America Hospital Association. Note: respondents could check more than one reason.

Programs improving retention

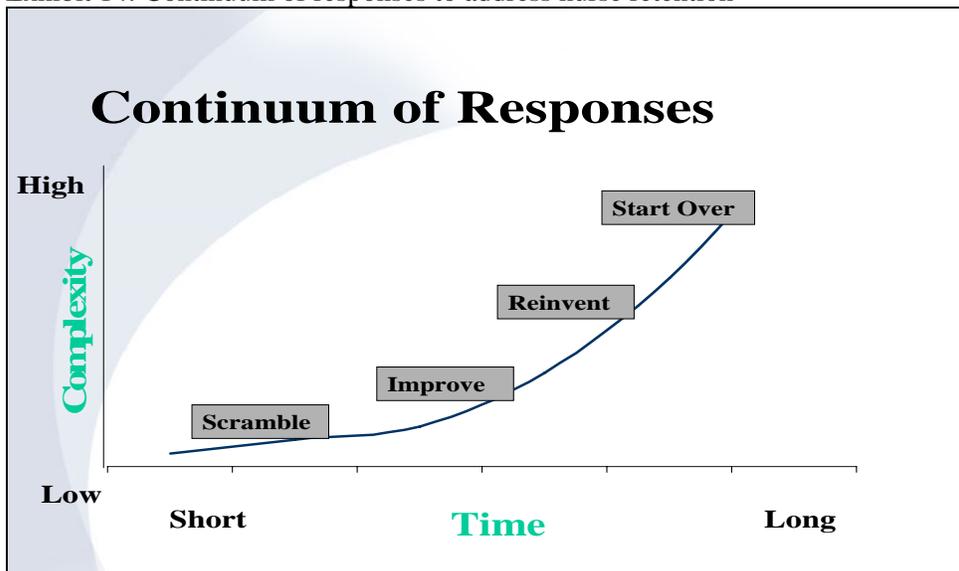
- **Mentoring:** Mentoring programs have provided dividends for retention. Physician practices reported assigning a mentor to 52 percent of new physicians. Turnover for physicians without mentors was 7.2 percent, while those with

mentors had a turnover rate almost 1 percent less at 6.3 percent. Physicians with mentors within the same department report a turnover rate of 5.8 percent, or 1.4 percent less than physicians without mentors.

- **Physician Retention Programs:** Only 40 percent of physicians groups report having a designated physician retention program, and of those that maintain a program, only 20 percent have an identified plan with goals. Of all responding groups, no academic medical institutions participating in the survey reported having a plan.
- **Succession Plans:** Thirty nine percent of groups reported having a senior leadership succession plan, and of those with a plan, 42 percent have written goals for their succession plan. Fifty percent of academic medical institutions have a plan. However, none reported having a document with identified goals and strategies.

The California Nursing Initiative offers a paradigm to promote retention.⁷ The paradigm is organized across dimensions of time and complexity and is summarized in Exhibits 14 and 15.

Exhibit 14: Continuum of responses to address nurse retention



Source: California Nursing Initiatives

⁷ The Center for the Health Professions. University of California, San Francisco. SNI/CAPH Best Practices Forum. Innovative Strategies in Nursing: Recruitment, Retention, Diversity, and Career Development. July 31, 2002.

Exhibit 15: Nurse retention continuum

Category	Scramble:	Improve	Reinvent	Start Over
Orientation	Nurse as commodity:	Nurse as customer:	Nurse as valued asset	Nurse as professional partner
Examples of Recruitment and Retention Efforts	<ul style="list-style-type: none"> • Sign-on bonus • 4 color brochures • Media campaigns 	<ul style="list-style-type: none"> • Flexible scheduling • Inpatient Lift teams • Mentor Programs • Preceptor rewards/recognition • Forgivable loans • Tuition for scholarships • Nurse manager development plan 	<ul style="list-style-type: none"> • New roles for aging nurses • New roles for clinical staff • Electronic Medical Records • Diversity valued • Shared governance • Professional advancement defined • Nurses rewarded for sustained and improved outcomes 	<ul style="list-style-type: none"> • New care delivery models • New professional and practice models • CNO reports to CEO • Cultural Competency is a core value

Source: California Nursing Initiatives

When “given a choice between a ‘lifestyle-friendly’ specialty and a ‘lucrative specialty,’ 55 percent of graduating doctors choose lifestyle-friendly careers while only 9 percent choose the most lucrative positions.”⁸ Lifestyle-friendly, also referred to as controllable lifestyle, offers personal time free of practice requirements. This time is intended for recreation, family time, and other hobbies.

⁸ CEJKA Search. Physician Recruitment Woes of Medical Groups Not Expected to Ease Up Soon. www.cejkasearch.com. Retrieved on 7.2.07.

Exhibit 16 presents specialty choice by U.S. graduating medical students. Specialties viewed as controllable are growing, while those viewed as uncontrollable are on the decline. Lifestyle choice is not the only consideration. Other factors such as income and malpractice insurance also play important roles, but lifestyle considerations are growing in relative importance. Recognizing these forces will help sustain Memorial Hospital's recruitment and retention in to the future. It will also be important to leverage the prestige of UMMS to attract key staff members, including from abroad.

Exhibit 16: Graduate specialty choice

Specialty	Lifestyle⁹	1995	2000	2006
Anesthesiology	Controllable	2.9%	4.1%	7.5%
Dermatology	Controllable	1.3%	2.4%	2.7%
Emergency Medicine	Controllable	5.8%	7.1%	7.7%
Internal Medicine	Uncontrollable	20.5%	10.2%	5.1%
Family Practice	Uncontrollable	16.0%	12.5%	7.0%
OB/GYN	Uncontrollable	7.9%	5.6%	4.6%

Source: Association of American Medical Colleges

Measuring economic and fiscal impact: the economics of what's at stake

In considering economic losses from a relocation of Memorial Hospital or important elements thereof, the key question is how much economic activity will move from Talbot County to another county or counties. Given the evidence from Eastern Shore counties and other geographies, the following outcomes are likely:

- Other healthcare establishments will relocate near the new hospital. In the short term, physicians may be the first to relocate offices. In the longer term, however, there is a high probability that many other providers and establishments will move;
- The supply chain, which serves the hospital and these relocated healthcare establishments will become less connected to Talbot County and more diffused;
- Medical transfer payments previously entering the Talbot County economy will be diverted to other counties;
- Talbot County may have more difficulty attracting and retaining businesses and retirees;
- The locus of activity for Talbot County's healthcare sector will move from Easton to the new hospital location; and
- Those most likely to be affected from the perspective of employment opportunities will be workers of low-to-moderate skills and pay.

⁹ American Medical Association. Influence of Controllable Lifestyle on Recent Trends in Specialty Choice of US Medical School Students. 2003

The extent of economic loss is highly uncertain. Unknown factors that will affect the extent to which healthcare economic activity will leave Talbot County include, but are not limited, to the following:

- The exact location of a new hospital;
- The number of healthcare offices and establishments that would relocate and where they would relocate;
- The extent to which the existing hospital continues to provide healthcare services;
- The extent to which healthcare workers relocate outside Talbot County after the hospital and other establishments move; and
- The ability of workers currently employed in these establishments who remain in Talbot County to commute to new business locations.

The most likely sources of economic loss are assumed to emerge from activities connected directly to the hospital and to those doctors' offices most associated with the hospital, including those located within the same zip code. These two segments of the healthcare sector account for most of the sector's economic activity as shown in Exhibit 17.

Exhibit 17: Estimated Talbot County jobs, income, and revenue for Memorial Hospital and offices of physicians with links to the hospital (dollars in millions)

<i>Healthcare segment</i>	<i>Jobs</i>	<i>Income</i>	<i>Revenue</i>
Hospitals	1,132	\$53.3	\$117.5
Offices of physicians	646	\$43.1	\$70.5
Total	1,778	\$96.4	\$188.0

Given the multiplier effect (Exhibit 4) any movement of hospital or doctors' office economic activity out of Talbot County would have additional economic repercussions. Because the extent of economic loss is unknown at this point, Exhibit 18 provides estimates of that loss on an annual basis for a range of possibilities. The low end of this range is that 20 percent of the economic activity leaves Talbot County; the high end is that all economic activity related to the hospital and these doctors' offices leaves. The loss is shown in five 20-percentage point increments.

Exhibit 18: Potential economic impacts from hospital relocation (dollars in millions)

<i>Degree of loss</i>	<i>Hospitals</i>			<i>Offices of physicians</i>			<i>Total</i>		
	<i>Jobs</i>	<i>Income</i>	<i>Revenue</i>	<i>Jobs</i>	<i>Income</i>	<i>Revenue</i>	<i>Jobs</i>	<i>Income</i>	<i>Revenue</i>
20%	239	\$10.3	\$25.3	211	\$11.3	\$22.2	450	\$21.6	\$47.6
40%	478	\$20.6	\$50.7	421	\$22.7	\$44.5	899	\$43.3	\$95.2
60%	717	\$30.9	\$76.0	632	\$34.0	\$66.7	1,349	\$64.9	\$142.8
80%	956	\$41.2	\$101.4	842	\$45.3	\$89.0	1,799	\$86.6	\$190.3
100%	1,196	\$51.6	\$126.7	1,053	\$56.7	\$111.2	2,248	\$108.2	\$237.9

If the relocation of the hospital involves 20 percent of the hospital's economic activities and 20 percent of doctors' offices' activities out of the county, an estimated 450 county

jobs would be lost. These jobs would have an associated annual income of \$22 million. Revenue losses would total \$48 million.

Greater movement of hospital and doctors' office economic activity would lead to greater losses for the county. In the unlikely event that all current hospital economic activity and all activity associated with these doctors' offices leave the county, the total economic loss is estimated at over 2,200 jobs, \$108 million in income, and \$238 million in revenue/business sales. This represents 11 percent of Talbot County jobs and 17 percent of income.

These jobs and other economic benefits would not disappear, but would migrate to other areas of the Eastern Shore. One possibility – unlikely and extreme – is that Talbot County and Queen Anne's County would change places with respect to the healthcare sector. Queen Anne's County (as shown in Exhibits 2 and 3) has a limited healthcare sector, but could be a major beneficiary over the longer term if it becomes the site of a major regional medical center.

As noted above, there is also some evidence that the loss of a hospital reduces future economic growth in a community. Any more general reduction in economic activity would be in addition to the losses shown in Exhibit 18.

Finally, given the concentration of healthcare activity in Easton, the relocation of the hospital will have the greatest effect on businesses in Easton. The impacts include not only the doctors' offices and other healthcare establishments that would move toward the new hospital, but also the range of businesses that depend upon healthcare businesses and/or their workers. These range from office supply companies to coffee shops.

The exhibit below shows the dense array of healthcare offices that are strategically situated around the Memorial Hospital at Easton. Included in the population of establishments are a diagnostic and imaging center, Eastern Shore Urology Associates, Easton Family Physicians, Mid Shore Women's Health, Shore Surgical Group, Tidewater Pediatrics, Chesapeake Cardiology, an orthopedic center, a dialysis treatment facility and The Pines (Genesis Eldercare Network). Many of these businesses may have to consider relocating out of Easton were a new medical center situated roughly 20 minutes away. This could leave the community with a surplus of real estate poised for deterioration and of course less access to proximate and specialized care (additional detail below).

that health services becomes a less reliable generator of economic activity in and around Easton, these sectors would be called upon to fill any economic void.

- Leisure and Hospitality

Key segments of the leisure and hospitality sector also hold promise. Restaurants comprise two-thirds of this sector, but would not represent a focal point given the nature of space potentially vacated and the fact that restaurants are among the lowest-wage sectors in the national and Maryland economies.

However, other segments of the leisure and hospitality sector offer higher wages and also the opportunity to attract greater spending within the county's boundaries. These include bed and breakfasts, boutique hotels, and specialty retail. Each of these segments offers the opportunity for small business formation, and it may be that Talbot County can leverage the presence of wealthy residents to spur business formation within these segments.

- Other Health Services

Though Easton would lose much of its appeal to health providers were a significant portion of services at Memorial Hospital to be relocated well beyond the town's boundaries, the nature of the space and the area's elderly demographics may help to attract replacement employers. The most obvious user of space that would become available might fall within the assisted living/nursing home category. Though firms operating in these segments may prefer all things being equal to be more proximate to concentrated medical services, the ability to use existing space and avoid certain construction costs may be enough of an inducement to permit backfilling of space and employment generation in this manner.

- Other Services

There are of course a litany of other service categories that could help to create replacement tax base, employment opportunities and backfill available space. These services range from educational and testing services to call centers to law firms, accountancies, architectural concerns and engineering companies.

Potential fiscal impacts from hospital relocation outside of Talbot County

Loss of income would lead to loss of County income tax revenue. This loss would depend in large part on healthcare workers choosing to move from Talbot County as a consequence of the relocated hospital or relocated doctors' offices. Such moves may be more unlikely than the relocation of healthcare facilities and offices. Nevertheless, some relocation is likely, especially in the longer term. Exhibit 20 estimates the loss in County income tax receipts if hospital and doctors' office workers moved from Talbot County. As with Exhibit 18, this loss includes the multiplier effect and is shown in five 20-percentage point increments. Lost annual County income tax receipts range from \$0.4

million to \$2.2 million. The \$2.2 million figure represents 3 percent of the County general fund tax revenue.

Exhibit 20: Potential loss of annual County income tax revenue

<i>Degree of loss</i>	<i>Hospitals</i>	<i>Offices of physicians</i>	<i>Total</i>
20%	\$0.3	\$0.2	\$0.4
40%	\$0.5	\$0.4	\$0.9
60%	\$0.8	\$0.6	\$1.3
80%	\$1.0	\$0.8	\$1.8
100%	\$1.3	\$0.9	\$2.2

The other major fiscal impact could be loss of property tax revenue derived from three sources. As a non-profit entity, the hospital itself pays no property taxes and its relocation has no impact per se on County property tax receipts. The major sources of potential property tax losses are:

- residential properties of healthcare workers;
- business properties of healthcare proprietors; and
- a general decline in property values as a result of reduced amenities/quality of life in Talbot County.

The extent of loss would be mitigated in part by the fact that residences and business properties vacated by healthcare workers and proprietors would not disappear. However, they would likely be more difficult to transfer or sell to others after the relocation of the hospital. Any long-term increase in vacancy rates would tend to lower property prices and contribute to a general decline in property values and a loss of property tax revenue.

Such reductions in tax revenue are much more nuanced and conditional than the clear case of a healthcare worker leaving Talbot County and transferring his or her income tax to another county. As a result, no estimate of the impacts of hospital relocation on property tax revenue has been made at this time.

Access to Care and Proximity

Memorial Hospital is the largest provider of health services on Maryland's Upper Eastern Shore and the second largest on the Eastern Shore with respect to annual admissions after only Peninsula Regional Medical Center in Salisbury. FY2006 data serve as a testament to the breadth of services the hospital provides, including services to 10,054 admittees and 38,363 emergency room patients. The hospital also performed nearly 5,000 surgeries (4,998) and took in \$117.5 million in revenues.¹⁰ Service categories include oncology, respiratory, cardiovascular, orthopedics, neurosurgery, urology, gynecology, gastroenterology and general surgery.

On July 1, 2006, Shore Health System's two hospitals (Memorial and Dorchester General) joined the University of Maryland Medical System (UMMS) and its four other hospitals. According to published materials, the merger accomplished UMMS' mission to advance its regional presence beyond the Baltimore Metropolitan area. UMMS, with its 11,000 employees and annual revenues of \$1.5 billion, promised to expand existing clinical services, improve tertiary services for the most serious and complex medical conditions, improve physician access, increase access to capital and expand research and teaching opportunities. The merger was touted by UMMS as one focused upon "growth and opportunity."¹¹ The community can reasonably expect additional capital funding/investment, access to additional physician capacity, and stronger interdisciplinary ties with the University of Maryland Medical Center.

Demographics of Talbot County

The Upper Eastern Shore and Talbot County are characterized by aging and growing populations. Between 2005 and 2030, Talbot County's population is expected to increase 18 percent. As a region, the Upper Eastern Shore is expected to grow by 46 percent during this same time. As Exhibit 21 indicates, the Upper Eastern Shore is projected to be the fastest growing region in Maryland between 2005 and 2030.

Exhibit 21: Projected population growth by Maryland region, 2005 through 2030

<i>Region</i>	<i>2005 Estimated Population (thousands)</i>	<i>2030 Projected Population (thousands)</i>	<i>Net Growth (thousands)</i>	<i>% Growth</i>
Baltimore Region	2,613.2	2,916.0	302.8	11.6%
Eastern Shore (upper)	229.7	335.3	105.6	46.0%
Eastern Shore (lower)	195.8	249.7	53.9	27.5%
Southern Maryland	321.7	462.0	140.3	43.6%
Washington Suburban Region	1,996.9	2,469.9	473.0	23.7%
Western Maryland	244.9	296.6	51.7	21.1%
Maryland	5,602.2	6,729.5	1,127.3	20.1%

Source: Maryland Department of Planning

¹⁰ Shore Health System, 2006 Annual Report to the Community

¹¹ University of Maryland Medical System, April 27, 2006

Presently, the population aged 65 and older comprises 21 percent (7,310 of 35,550) of Talbot County's population. Data indicate that Talbot County is home to the state's oldest population (median age – 44.2 in 2006¹²). In Talbot County, between 2005 and 2010, the senior population is projected to grow another 13.7 percent. Between 2005 and 2015, the senior population is projected to grow 33 percent.¹³

Exhibit 22: Median age by Maryland jurisdiction, 2006 estimates

Rank	Jurisdiction	Median Age, 2006 est.
1	Talbot County	44.2
2	Worcester County	43.9
3	Kent County	42.3
4	Dorchester County	41.8
5	Queen Anne's County	40.2
6	Allegany County	40.0
6	Garrett County	40.0
8	Baltimore County	39.1
9	Montgomery County	38.6
10	Carroll County	38.2
11	Washington County	38.1
12	Caroline County	37.9
13	Harford County	37.8
14	Anne Arundel County	37.7
15	Howard County	37.6
Maryland		37.4
16	Calvert County	37.0
17	Cecil County	36.7
18	Frederick County	36.6
19	Wicomico County	36.2
20	Somerset County	35.9
21	Baltimore City	35.8
22	Charles County	35.3
23	St. Mary's County	35.1
24	Prince George's County	34.7

Source: DecisionData

Trends in hospital utilization

Between 1970 and 2004, hospital utilization among Americans aged 65 and over increased 24 percent. Moreover, in 2004, the elderly comprised 38 percent of all hospital patients compared to only 20 percent in 1970. Average length of stay is also highest among the elderly (5.6 days). And while the elderly (as defined by a 2006 CDC report) make up just 12 percent of the nation's population, they constitute 38 percent of hospital discharges and 44 percent of patient days.¹⁴

¹² DecisionData, demographic data subscribed to by Sage.

¹³ Maryland Department of Planning

¹⁴ Center for Disease Control, Advance Data from Vital and Health Statistics, May 4, 2006

Recent data specific to Memorial Hospital provide additional insight regarding trends in utilization. Utilization for emergency/urgent care rose 11 percent over the last five-year period for which there were data available to the study team to analyze (FY2001-FY2006). Patient volumes related to labor/delivery were up 48 percent over this five-year period.

Exhibit 23: Utilization of key Memorial Hospital services, FY2001 vs. FY2006

Type of Service	FY2001 patients	FY2006 patients	Net Change	% Change
Emergency/Urgent care	34,899	38,628	3,729	11%
Labor/Delivery	2,801	4,141	1,340	48%

Source: St. Paul Computer Center, Inc.

The implication of data characterizing broader national and narrower local trends is clear. Talbot County will require greater, not less, hospital capacity going forward, not less. It is unclear whether Memorial Hospital's 147 average bed capacity will accommodate future demand. In recognition of the need for expansion, Memorial Hospital has planned a \$50 million emergency care expansion set for completion at the end of 2007. This would allow for the treatment of 50,000 additional patients.

In 2004, 13 percent of all hospital stays nationally were associated with heart disease, followed by respiratory and digestive conditions. Twenty percent of all female discharges were following child birth, and 1,540 surgical procedures were performed for every 10,000 people.¹⁵ Important medical/surgical procedures to retain within the community include the treatment of heart disease, services for cardiac catheterization, prenatal care, malignant neoplasm, renal failure, diabetes, oncology, etc.¹⁶

Lack of proximate access to hospital services would also likely reduce the level of preventative care within the population. Preventative care has emerged as a Maryland hallmark, but communities that lack proximate access are likely to achieve statewide norms. For instance, 88 percent of Maryland women receive Pap Smears (ranked first in the country), 80 percent of women receive mammographies (ranked eight), 52 percent of citizens receive colon cancer screenings (ranked sixth), and 79 percent of citizens receive cholesterol screening (ranked seventh).¹⁷

Research indicates that this is more than pure speculation. A National Health Services Corp study found that living near a clinic or physician's office promotes better preventative care and more continuous care in the event of illness. Moreover, expanded travel time increases the costs of receiving treatment and lowers the observed utilization of care. Of central import is that travel time becomes an even greater deterrent as patient

¹⁵ Center for Disease Control, Advance Data from Vital and Health Statistics, May 4, 2006

¹⁶ National Hospital Discharge Survey Data, 2004

¹⁷ Health Data for All Ages, 2005

age increases.¹⁸ This is especially relevant in rural regions with concentrations of elderly residents such as Talbot County.

Proximity and access to care

Talbot County residents already share a sentiment that local availability of primary and specialty care is lacking.¹⁹ Notable concerns include too few primary care providers, which impacts patients' abilities to make timely appointments. Common complaints include an inadequate capacity to deal with a host of medical conditions, including mental health, gerontology, diabetes, Lyme disease treatment, etc.

Residents also state a desire for better care coordination. In the past, there has been relatively little formal communication and consultation between Memorial Hospital and other medical institutions. Residents have expressed a demand for greater integration and regional participation and consultation; goals consistent with integration of the hospital into UMMS. Talbot County could benefit tremendously from greater interaction between Memorial Hospital and UMMS affiliates in Baltimore, including the University of Maryland Medical Center and School of Medicine.

What may not be consistent with these goals is a plan to relocate various services presently offered at Memorial Hospital to a location in Queen Anne's County. UMMS has announced an intention to construct a grand and visible facility attractive to potential clients, even those who live beyond the Eastern Shore's boundaries. The new location is also intended to help recruit new physicians who would be lured to the area by state-of-the-art medical facilities and equipment. There are also plans to construct outpatient facilities adjacent to the hospital, which would allow numerous private practitioners to reestablish their practices in a denser medical environment. However, were this facility to be located outside of Talbot County, it is quite likely that much of the supply chain that is presently within the county would vacate the jurisdiction over the long-term. Moreover, it is unclear what incentive UMMS would use in the long term to maintain centrally important services/surgeries at Memorial Hospital into the long run. Talbot County's primary point of access would effectively shift to the west and possibly beyond the county's boundaries.

There are numerous factors that impact access; proximity is simply one of them. One University of California study found that announced hospital closures influence perceived access to care among "vulnerable" residents, specifically the elderly. The study reported that seniors found it more difficult to access healthcare once a hospital near them was shuttered. As an example of the kind of effects hospital closures can have, the study discovered a decline in colon cancer screenings once a particular hospital in Los Angeles

¹⁸ Eastern Economic Journal, "The Relationship Between the Supply of Primary Care Physicians and Measures of Health," September 2004

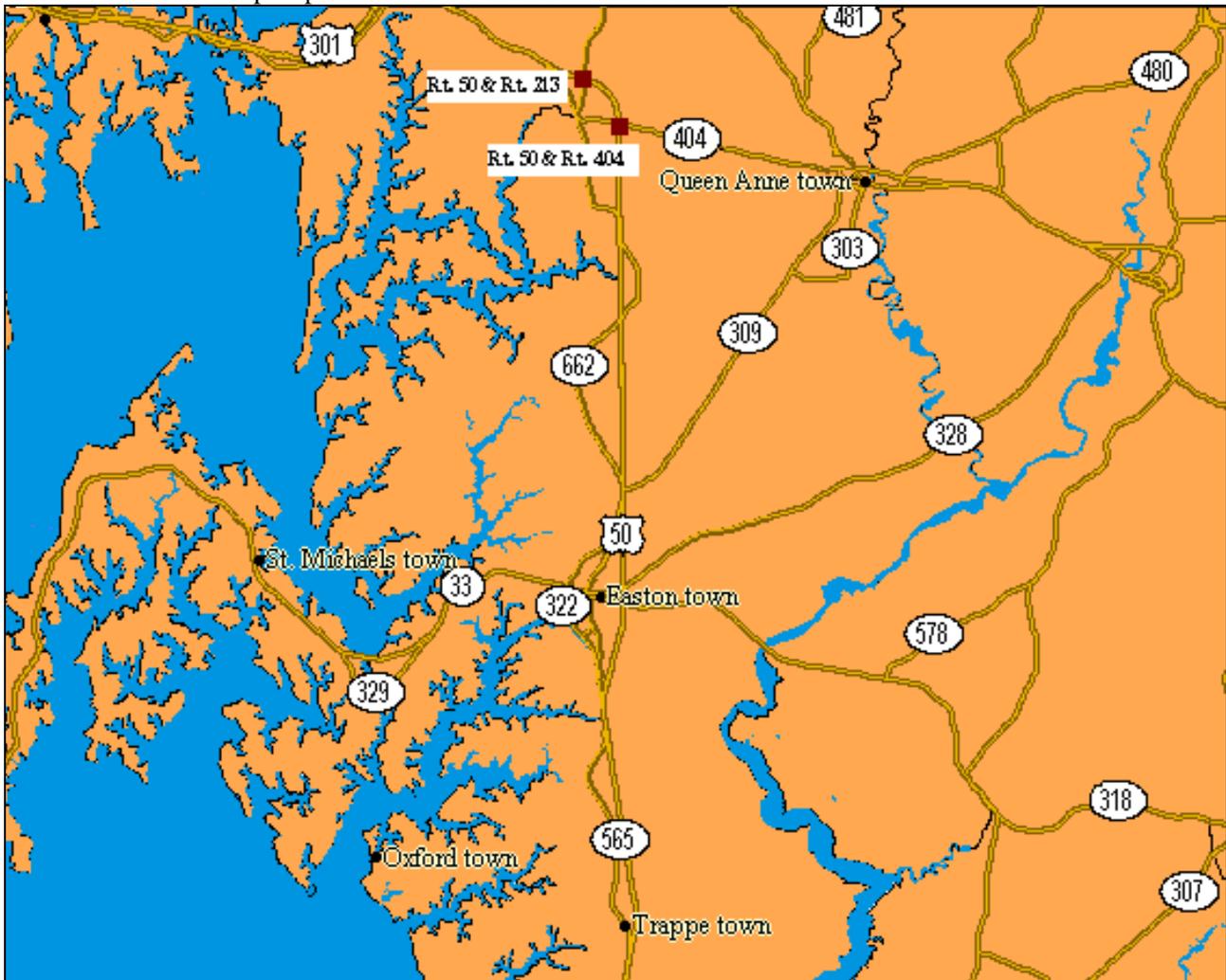
¹⁹ VCI Healthcare Team (2007). "Envisioning Comprehensive Quality Health Care," HealthMatters Summit.

was closed.²⁰ Of course, the situation at Memorial Hospital is substantially more nuanced given that closure is not proposed, though significant downsizing remains a possibility and the services which will remain is unclear.

The University of California report also analyzed hospital proximity and mortality. The study found evidence that increased distance to the nearest hospital is associated with higher mortality rates for emergency conditions. This aspect of the study may not be relevant, however, since it is likely that Memorial Hospital will continue to provide emergency care.

The map below provides a sense of how distant a new hospital may be from Easton and other Talbot County communities. The intersections of Route 50 and 404 and Route 50 and 213 are two possible locations for a new medical facility.

Exhibit 24: Map of potential medical center locations



²⁰ Buchmueller, T., Jacobson, M. & Wold, C. (2005). How far to the hospital? The effect of hospital closures on access to care, *Journal of Health Economics*, v. 25, 740-761.

The intersection of Route 50 and 404 is roughly 13.5 miles from Easton, 22 miles from St. Michael's and 23 miles from Oxford. In terms of travel time, the intersection is 17 minutes from Easton and over 30 minutes to both Oxford and St. Michael's. Easton enjoys greater proximity to each of these towns as well as to Trappe.

Because the intersection of Route 50 and Route 213 is even further to the north and west, distance and travel time are even greater. Trips from Oxford and St. Michaels would require 34 and 33 minutes, respectively. Patients originating from Trappe would need to travel nearly half an hour while those emerging from Easton would sustain a travel time approaching 20 minutes.

An Easton location for the new hospital and supportive business services

Talbot County is presently in the process of proposing to offer a parcel of land, Map 17, Parcel 58 and Map 17 Parcel 75 as a 236-acre regional medical site. The site is located north of Easton and has been identified as a location that may possibly satisfy the stated UMMS/SHS requirements. There is also a privately-held parcel on the eastern side of Route 50 at Easton's north end that may work as a site and the hospital owns a 300-acre site on Oxford Road. Talbot County and the Town of Easton are currently in discussions to determine an annexation timeframe, revision to the Comprehensive Plan, amendment to the Comprehensive Water and Sewer Plan and the creation of zoning for a newly constructed regional hospital.

For any of these sites to satisfy a new hospital's needs over the long-term, the County must also consider what it can do ensure the presence of business services required to support an expanded healthcare system. Of course, many of these services are already present in the vicinity of Memorial Hospital at Easton and therefore will be proximate to a new medical center that would be constructed within Town limits (perhaps through annexation). Still, there may be certain functions that need to be immediately proximate to the new medical center, including ambulance services, doctor's offices and other amenities. To the extent that this is true, Talbot County and Town of Easton policymakers must ensure sufficient land and infrastructure necessary to jointly accommodate the proposed new medical center and related business services.

Future research

There will be many questions to come based on decisions made by the University of Maryland and other key stakeholders. At some point in the future, County and Town leadership may have to assess opportunities for adaptive reuse of medical facilities, may have to target industries that backfill this space, including possibly assisted living or other related industry, develop a plan to support the physical expansion of Memorial Hospital and attract business services to augment the capabilities of local health service providers.

There will be broader economic development considerations as well. Irrespective of what transpires in and around Memorial Hospital, the community will have to strategically consider issues related to workforce development, particularly as it relates to

those currently in low-paying occupations, workforce housing, general business attraction and retention, transportation and other significant economic development issues. It may be time for the community to organize a countywide Economic Development Summit to plan for its future, with or without Memorial Hospital or significant components thereof.

Conclusion

Key findings

- Data confirm that healthcare represents a centrally important part of Talbot County's economy. In 2005, over 2,700 people were employed by the local healthcare sector and collectively earned \$105 million in wages. Wages averaged \$742 per worker per week. An estimated 130 different business locations provided healthcare goods and services in that year, most tied directly to Memorial Hospital.
- For each \$1.00 of income earned by Memorial Hospital employees, an additional \$0.45 is earned by other workers in the county. For each \$1.00 of sales or revenue generated by Memorial Hospital, an additional \$0.63 of sales is generated for other Talbot County businesses.
- While medical transfer payments represent a relatively small share of personal income, they are increasing at a faster rate than the rate for total personal income. In other words, medical transfer payments are becoming more important as a personal income source. This is, in part, a reflection of an aging population that consumes an increasing number and volume of medical services and that relies on Medicare to pay for medical expenses. From 1995 to 2005, medical transfer payments increased 112 percent in Talbot County, a rate slightly higher than medical payments in Maryland and much higher than the overall rate of increase in personal income.
- Healthcare employment in the 21601 zip code (Easton) constitutes almost one-fifth of that zip code's total employment. Healthcare workers earn almost \$1 of every \$4 earned by all workers and earn on average over 20 percent more. Healthcare establishments in the 21601 zip code represent 11 percent of the zip code's total business establishments.

Implications

In sum, Talbot County faces serious losses in economic vitality and quality of life should a significant portion of activities be shifted from The Memorial Hospital at Easton. This strategic plan has quantified the magnitude of the potential harm and has also provided policymakers with guidance related to prioritization of those medical services that are most important to retain within the community given considerations of county demographics and requirements for proximity. These include medical services used most

intensely by the elderly, emergency care, and those that relate to chronic conditions such as diabetes and renal failure.

Strategically, the community must work to retain as much of its healthcare delivery network as it possibly can. Under the best possible scenario, the County will have the opportunity to work with the University of Maryland to augment current healthcare offerings at Memorial Hospital and to transform the facility into an even more substantial regional health provider.

Under the worst possible scenario, there will be an attempt to relocate key healthcare functions from Memorial Hospital to an adjacent community. This would require the community to reshape its economy quickly; one that already is characterized by a disproportionate share of families with low incomes and by persistent underemployment. The relocation of healthcare would have particularly significant impacts upon the elderly, who rely more than others upon proximity and who have been known to reduce consumption of preventative care in the absence of proximity.

Possible replacement economic drivers include senior housing/healthcare, residential development/construction, money management, business services and leisure/hospitality. For the most part, however, these industry segments are not as economically stable as healthcare.