

# Hospital Costs in Context: A Transparent View of the Cost of Care

ACUTE CARE HOSPITAL COSTS IN MASSACHUSETTS (FY 2004 TO FY 2008)



APRIL 2010

**M H A** MASSACHUSETTS HOSPITAL ASSOCIATION

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# Executive Summary

There has been substantial discussion and debate recently on the state and federal stages about the “cost” of healthcare, but “cost” in this context means different things to different stakeholders. To employers and insured individuals, “cost” generally represents premiums paid for health insurance coverage. To health plans, government agencies and uninsured individuals, “cost” means the price paid for healthcare services to service providers – hospitals, physicians and other medical practitioners, nursing homes, home health agencies and other entities. To hospitals, “cost” is the resources it takes to produce and deliver high-quality medical services to the community.

On behalf of its member hospitals, the Massachusetts Hospital Association (MHA) is issuing this report to describe the cost of hospital care<sup>1</sup> from the perspective of the resources hospitals need to provide the high quality care that the people of the Commonwealth expect and depend on. The focus of this paper is on “cost” as experienced by hospitals because this is a part of the cost equation that is little understood and needs to be examined closely along with other factors such as benefit design, administrative simplification, addressing societal needs such as a health care safety net for successful and sustainable reform of the healthcare system.

This paper is intended to inform policy development and advance transparency as all stakeholders in the Massachusetts healthcare system work together to achieve sustainable balance between cost and value over the long-term.

<sup>1</sup> Unless otherwise stated, the source of the data used in the report is the Division of Health Care Finance and Policy-403 Hospital Statement of Costs, Revenues and Statistics (DHCFP-403 cost reports), a detailed cost report that each Massachusetts-based hospital is required to submit to the Division of Health Care Finance and Policy (DHCFP) each year.

# Hospital Expenses and How They've Grown

## A. Labor is the largest single component of hospital costs, representing nearly two-thirds of total hospital expenses.

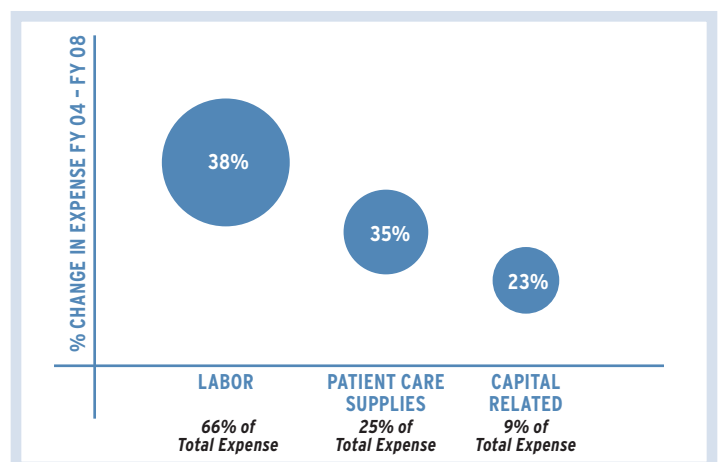
- In FY 2008, Massachusetts hospitals paid out over \$8.2 billion in payroll dollars to approximately 115,000 full-time equivalent employees (FTEs).
- Of these employees, 27% were Registered Nurses and Registered Nurse Specialists. An additional 5% were supplemental nursing staff.
- **Between 2004 and 2008 hospitals hired 11,800 (11.4% more) additional FTEs.** Some of the additional staff positions replaced contract labor which resulted in overall cost savings. Others filled newly created positions in support of patient safety and quality initiatives, including the collection and reporting of measurement data. Others include one-to-one patient "sitters" to prevent falls and other accidents; and new IT specialists to advance electronic medical records, physician order entry systems, and electronic health records. Some of this additional staff is needed to support effective and fundamental long-term reform. Further, administrative complexity in claims submission, verification, and audit processes led hospitals to hire more analysts and documentation staff to collect and retain payment from private and governmental payers.
- **The makeup of a hospital's workforce** is also changing. Hospitals have experienced and continue to experience a shift to more qualified and certified workers (e.g. from licensed practical nurses to registered nurses) as the push for increased quality and safety continues.
- **Wages paid to RNs increased by 50.2% from FY 2004 to FY 2008** - an increase of just under \$1 billion, attributable to both increases in hourly rates and total hours paid.
- **Other (non-RN) nursing staff wages grew by 45.1%** - an additional \$165 million.
- All other (non-nursing, non-physician) staff wages grew by 25.6% (just under \$1 billion) from FY 2004 to FY 2008, an annual average of 6.4%.
- These increases are driven by long-term shortages in key professions and the need for hospitals to compete for labor, which tends to drive up prices in the labor market.
- Based on hospital reports, **physician compensation grew by 34.2%** (an annual average of 8.6%) over the four-year period, but a large measure of physician-related expenses are recorded frequently on hospitals' affiliates' books, and thus are not reflected in the source data that was used for this report. Physician recruitment and retention is one of the most compelling financial pressures with which hospitals must deal today in order to have sufficient physician coverage across all essential specialties around the clock.
- **Fringe benefits** increased by 42.5% from FY 2004 to FY 2008 (an annual average of 10.6%) primarily due to increases in health insurance premiums and pension fund adjustments that had to be made as investment values plunged and balances fell below required funding levels.
- **Purchased Services (non-payroll labor)** increased by 55.8% (an annual average of 14.0%) as hospitals filled persistently vacant positions in nursing, pharmacy, physical and occupational therapy, imaging and respiratory care and as economic decisions to outsource entire hospital departments were made.

## B. Patient care supplies and other expenses grew 34.7% from FY 2004 to FY 2008 (an annual average of 8.7%).

Some examples of supplies include medical supplies (bandages, syringes, etc.), instruments and devices, drugs, food and food service supplies, office supplies and forms. Hospitals in Massachusetts have been particularly challenged to manage the cost of supplies and other expenses when embedded in those costs are the higher-than-average costs (wages, fuel, etc.) that Massachusetts suppliers incur in making, distributing and delivering goods to Massachusetts hospitals.

Control of these expenses comes through enhanced supply chain management, aggressive contracting with vendors, group purchasing initiatives and value-based trade-offs. Supplies and devices have been standardized, "just in time inventory" practices are in place, and "zero tolerance" for waste is promoted.

There has been impressive success in the management of **drug costs** in particular from FY 2004 to FY 2008, with a 10.9% cost reduction achieved through patent expiration, implementation and adherence to cost-conscious formularies, group purchasing initiatives and aggressive negotiations with drug distributors.



## C. Capital related expenses include depreciation and interest which increased by 23.1% from FY 2004 to FY 2008 (an annual average of 5.8%).

In comparisons of capital costs per discharge with national and regional peer groups, it becomes clear that Massachusetts hospitals in aggregate have been slow to repair and replace their physical assets as they have faced difficulties in accessing capital. Over a period of years this can result in deterioration of physical plant, energy inefficiency and increases in expenses for repairs and maintenance.

*For an in-depth discussion of the influence of volume, inflation and product mix in hospital expense trends see section II of the paper.*

## The “Cost” of Doing Business with the Government

Increases in rates that private health insurers paid to hospitals were spotlighted in the DHCFP reports on healthcare cost and cost trends. Those increases are not completely explained by increases in hospital expenses attributable to volume, inflation and product mix. For hospitals, payment shortfalls under government programs represent a “cost” of doing business that increases year after year, a portion of which must be passed on to payers whose rates are at least to some extent negotiable.

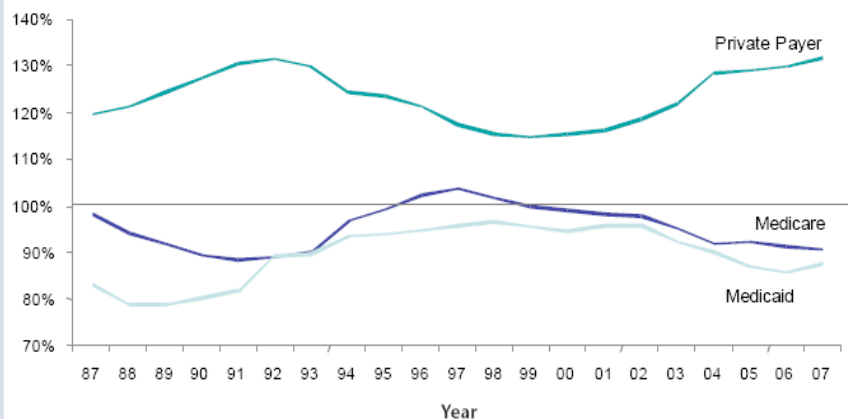
Medicare, Medicaid, Commonwealth Care and the Massachusetts Health Safety Net represented 51% of total hospital revenues in FY 2008. In FY 2008, Medicare paid Massachusetts hospitals 7.3% less than the cost of providing care and MassHealth (Massachusetts Medicaid) paid hospitals 14.2% less than cost. These represented **payment deficits of \$317 million and \$213 million for Medicare and MassHealth** respectively in the latest of a multi-year period of payment shortfalls under these programs. Compounding year to year, it is easy to see why and how shortfalls under public payment systems have handicapped even the most efficient hospitals.

Due to recent state budget cuts, MassHealth payment rates have further deteriorated significantly, with hospitals being paid on average 25% less than the cost of providing care and the funding shortfall growing to more than \$400 million in FY 2010. Hospitals have had to rely disproportionately on private payers to help make up for some of these shortfalls. With the population aging, and a sluggish economic recovery, there is concern that underpayments to hospitals will become worse over the years. ***This is a fiscal and societal crisis that healthcare payment reform must seek to address.***

From the DHCFP Report: *Massachusetts Health Care Cost Trends Part I:*

“Medicare and Medicaid have limited their own price increases since 1998, the first year of the Balanced Budget Act. Since that time, private payers have paid higher prices in relation to public payers... The ability of hospitals to negotiate higher payments varies widely”

U.S. HOSPITALS SHIFT COSTS TO PRIVATE PAYERS 1987 - 2007  
PERCENT OF HOSPITAL COSTS THAT ARE PAID



Source: DHCFP Report: *Massachusetts Health Care Cost Trends Part I*

## Preview of FY 2009 and Outlook to FY 2010

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For years, operating margins in Massachusetts hospitals have fallen short of the industry standard of a sustained 3% operating margin. In 2008, 78% hospitals in the state had an operating margin less than 3%. After substantial declines in financial performance in 2008, Massachusetts hospitals in 2009 made an all-out effort to reverse trends through implementation of aggressive cost management, seeking efficiencies and cutting expenses. As a result, most hospitals were able to improve operating margins. However, since many hospitals relied on savings steps that cannot be replicated or sustained over time to effectuate the improvement, the outlook for FY 2010 is bleaker than FY 2009.

28 hospital respondents to an MHA survey (representing about a quarter of all hospitals) reported that 1,226 full-time equivalent positions (FTEs) were eliminated during FY 2009 and another 475 positions were slated for elimination early in FY 2010 - these included layoffs and budgeted but unfilled position reductions. For these hospitals, the FY 2009 and FY 2010 position reductions represent 3.8% reduction in FTEs.

Compensation adjustments included freezes and pay reductions; changes in benefit programs shifted more healthcare costs to employees and reduced employer funding of retirement. Medical programs were eliminated in some cases, with more service curtailments in the form of reduced hours of operation promised.

## Conclusion

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Massachusetts hospitals have been juggling inflation pressures; universal demands for increased accountability and transparency in patient safety and quality (many of which require investments in information technology); and demands for the latest technology in medicine. In addition, hospitals are faced with substantial government payer shortfalls, labor market forces, and physician recruitment challenges. The increases in payment by private health insurers are symptomatic of the underlying challenges that hospitals face to deliver care that the community has come to expect. What Massachusetts hospitals are dealing with are broader economic issues that cannot be managed away, hidden or ignored.

The hospital community recognizes the need to address rising healthcare costs. Hospitals are engaged on a number of fronts to improve quality, accountability, transparency, efficiency, and affordability and these efforts will continue. Initiatives that are already in progress - such as the development of medical homes, pay for performance, improvements in end of life care, medical claim standardization, and reductions in preventable readmissions - all should yield efficiencies and savings to the delivery system, helping those that pay for it. Hospitals have made up-front investments in quality and safety initiatives and information technology which are expected to yield cost savings in the long term, much of which will accrue to payers, not hospitals.

Massachusetts hospitals have stepped up to endorse bold, comprehensive long-term reform of the healthcare system - including a voluntary transition to a global payment system. Long-term payment and delivery reform will not only result in a more integrated and coordinated system of care, but will have positive results in terms of bending the cost curve. To further this goal and educate policymakers and stakeholders MHA has issued a series of white papers on various aspects of payment and delivery reform, including the influence of benefit design; formation of accountable care organizations and the need to support societal needs. These papers are available on the MHA website [www.mhalink.org](http://www.mhalink.org).

The collective effort to date - including the cost control legislation (Chapter 305), the Special Commission on Payment Reform, the studies and reports released by state government and other policy groups, and the proposals put forth by all in the commonwealth - all have been positive steps to understanding the problems and the potential solutions. Moderating the growth of healthcare cost will require all constituencies to continue to collaborate on information sharing and problem solving. Critical to this effort is the recognition that short-term fixes such as caps on reimbursement that impose arbitrary limits on payments to providers without addressing the underlying value, structure and functioning of the delivery system can disrupt access to essential medical services and do irreparable damage to the economic environment in Massachusetts.

# INTRODUCTION

There has been substantial discussion and debate recently on the state and federal stages about the “cost” of healthcare, but “cost” in this context means different things to different stakeholders. To employers and insured individuals, “cost” generally represents premiums to be paid for health insurance coverage. To health plans, government agencies and uninsured individuals, “cost” means the price paid for healthcare services to service providers – hospitals, physicians and other medical practitioners, nursing homes, home health agencies and other entities. To hospitals, “cost” is the financial and other resources it takes to produce and deliver high quality medical services to the community.

Recently issued reports on healthcare cost trends and cost drivers have examined the issue of healthcare costs from the point of view of insurance premiums and rates paid to hospitals and other providers by private insurance carriers. What has not been addressed by the recently issued reports is healthcare cost from the point of view of the inputs or resources used by hospitals to provide the high quality care that the citizens of the Commonwealth have come to expect and depend upon. Moreover, explanation of the very delicate balance that hospitals must maintain between demand for services, the full cost picture and the very large proportion of revenues that do not cover cost and are not negotiable was outside the scope of purpose of the reports issued thus far. These relevant matters will be covered in this report.

The Massachusetts Division of Health Care Finance and Policy (DHCFP) recently published a series of reports on the state of the healthcare sector in Massachusetts. In Part I of the series, the Division observed that the Massachusetts healthcare system is the mainstay of the local economy both as an employer and as a draw for other growth industries such as biotechnology and pharmaceuticals; but DHCFP pointed to the downside impact of high costs on other economic sectors (see sidebar). Subsequent reports examined private health care insurance premium trends and health spending trends for the privately insured in Massachusetts from 2006-2008.

## From the DHCFP Report on Massachusetts Health Care Cost Trends Part I: The Massachusetts Health Care System in Context: Costs, Structure, and Methods Used by Private Insurers to Pay Providers.

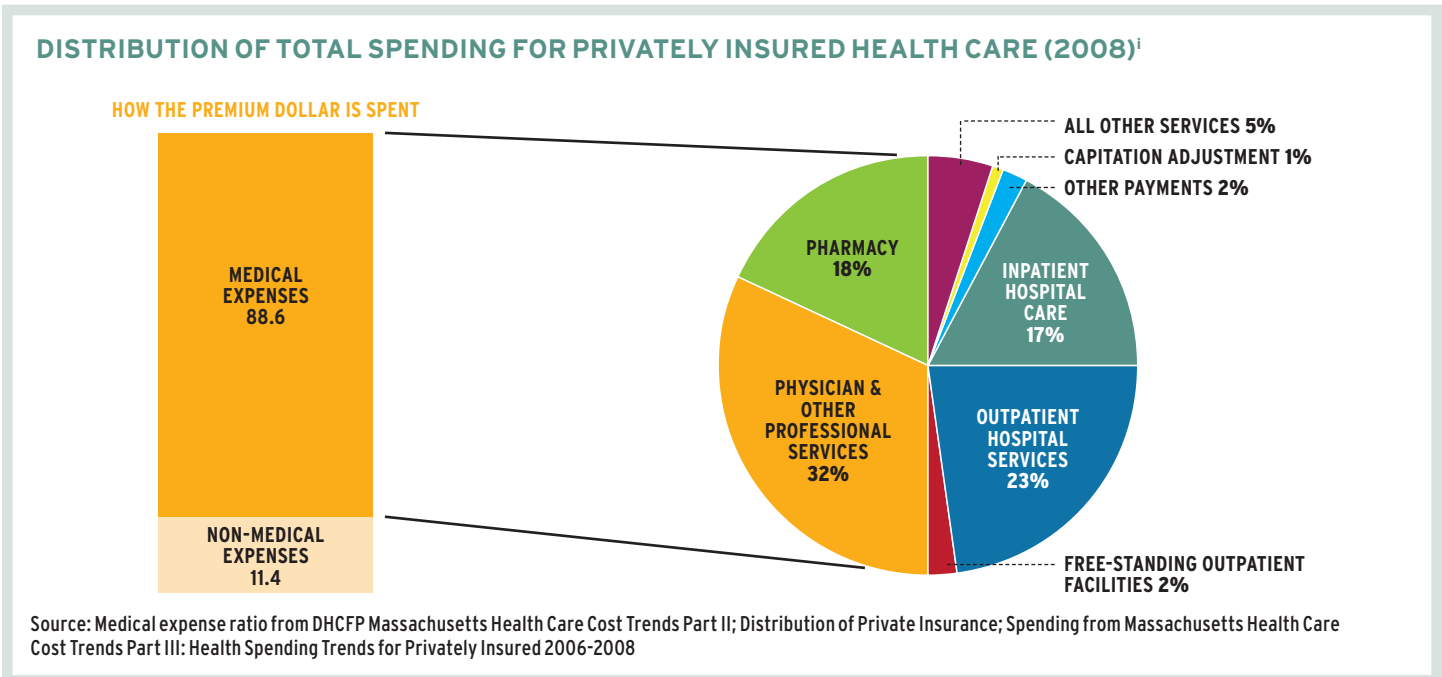
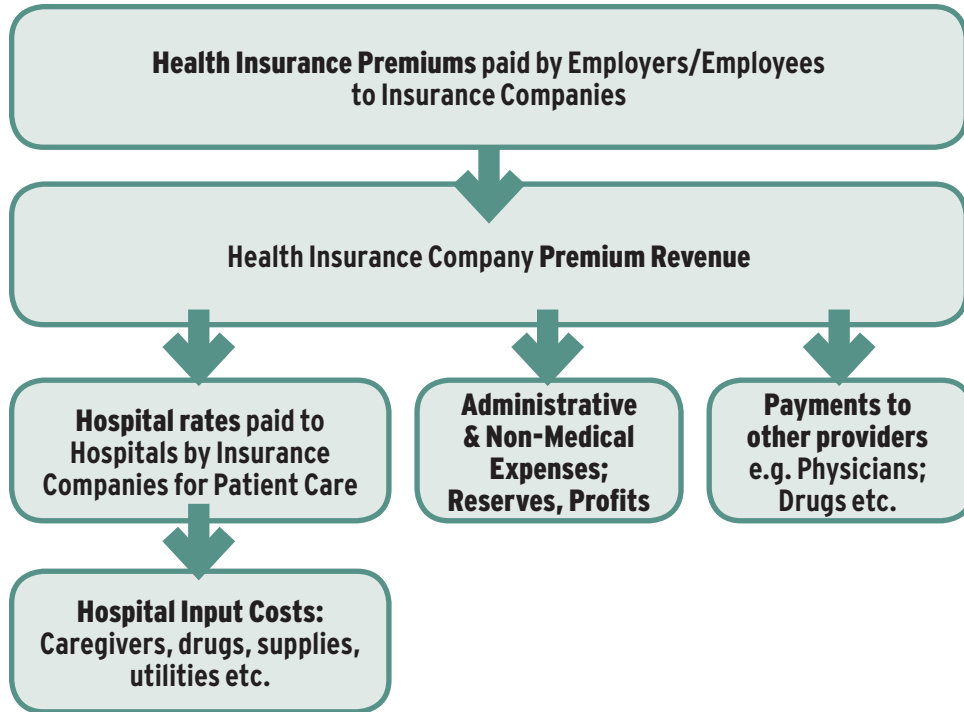
### What is unique about Massachusetts health care?

- Health care is the largest employer in MA, and contributes significantly to the local economy – directly through employment in places where care is delivered and indirectly through industries that have been drawn to MA to be near some of the most influential medical centers and research facilities in the world. These industries include biotechnology and pharmaceuticals, among others.
- Massachusetts is first among states in terms of access and seventh among states overall on the Commonwealth Fund State Scorecard. MA hospitals are often cited as among the best in the nation in terms of the quality of health care services provided, scoring higher than national average on treatment of major conditions. Furthermore, MA health insurers are consistently rated among the top ten best insurers in each category nationwide.
- MA spending on health care is 15 percent higher than the rest of the nation, even when accounting for higher wages in MA and spending on medical research and education.
- Continued increases in health care spending could negatively impact economic activity in other sectors.

### What characteristics of the Massachusetts health care system are leading to high spending levels and rapid cost growth?

- The way health care providers are paid rewards those that provide a higher number of individual services, rather than those that are best at coordinating care or delivering good quality services in less expensive settings
- A health care system dominated by a high number of specialty doctors (rather than primary care doctors that specialize in disease prevention) and by academic medical settings, both of which tend to provide costlier care
- A high concentration of physicians in academic medical centers compared to national averages
- Near universal health insurance and more generous insurance coverage than in other parts of the country, which leads to greater use of health care services, which in turn leads to higher levels of health care spending

The illustration below shows the flow of the private (employer-based) health insurance “dollar.” The chart below that shows the distribution of the premium dollar into medical and non-medical expenses (according to DHCFP’s recent report) as well as the distribution of the “medical expense” portion of the premium dollar for various uses.



In this paper, the categories of hospital input costs are defined and described, recent healthcare input cost trends and the factors driving them are examined and some of the broad trends emerging today are outlined. >>



# PART 1: Hospital Expense Categories: How the Hospital Dollar is Spent

**Hospital expenses** cover all activities related to the hospital's core business (healthcare) that flow through its primary accounts. Expenses can be categorized as either patient care related or non-patient care related. **Patient care related** expenses include both **direct** costs of providing inpatient and outpatient services and **indirect** overhead costs such as administration, patient accounting, information technology, environmental services, utilities and so on. Patient care related expenses consistently represent about 92% of total hospital expenses

**Non-patient care** related expenses (around 8% of total hospital expenses) might include parking facilities for which fees are charged, gift shops, coffee shops, research activities, fund-raising programs and activities, public relations and advertising, and other. Non-patient care expenses also include substantial "community service" obligations, particularly for tax-exempt hospitals which are also being assessed "payments in lieu of taxes" by an increasing number of Massachusetts cities and towns.

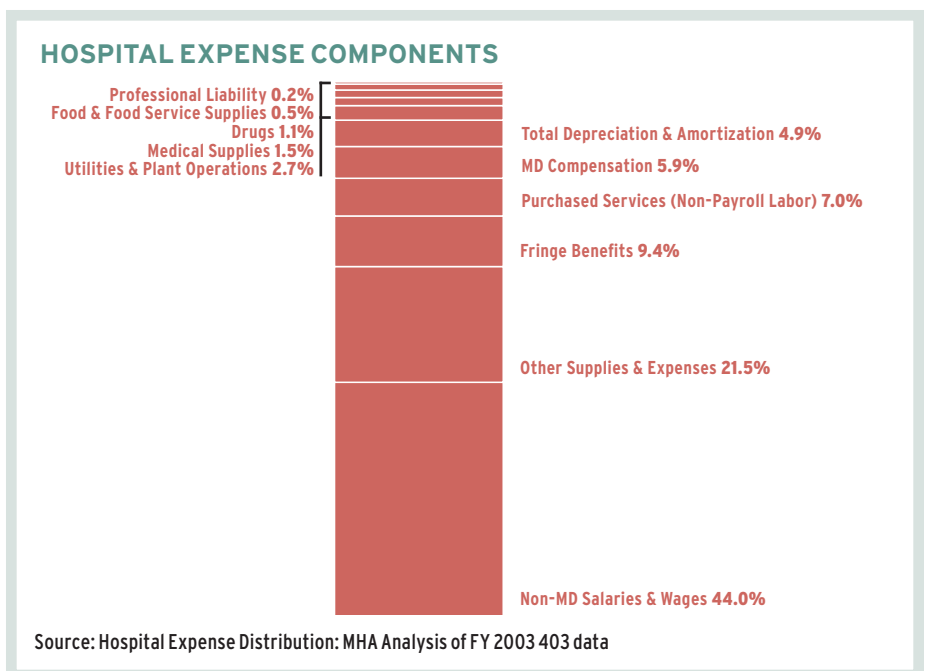
This report discusses aggregate acute care hospital expenses related to patient care services that are generally covered by third-party payers and all the overhead a hospital allocates to those services on its annual D403 cost report filings<sup>2</sup>. Table 1 below shows total patient care related expenses in 2004 and 2008 and the portion attributable to inpatient and outpatient departments.

**TABLE 1: PATIENT CARE EXPENSES**

(*expressed in thousands)	FY 2004		FY 2008		4-YEAR CHANGE	
	TOTAL	% OF TOTAL	TOTAL	% OF TOTAL	#	%
<b>INPATIENT EXPENSES</b>						
TOTAL*	\$6,811,583	54.2%	\$9,051,164	53.0%	\$2,239,581	32.9%
PER DISCHARGE	8,028		10,573		2,545	31.7%
PER PATIENT DAY	1,650		2,197		547	33.1%
<b>OUTPATIENT EXPENSES*</b>	\$5,766,951	45.8%	\$8,013,136	47.0%	\$2,246,184	38.9%
<b>TOTAL PATIENT CARE EXPENSES*</b>	<b>\$12,578,534</b>	<b>100.0%</b>	<b>\$17,064,300</b>	<b>100.0%</b>	<b>\$4,485,765</b>	<b>35.7%</b>

Source: MHA Analysis of 403 Cost Report Data.

The bar chart to the right shows the **categories of hospital expenses** in fiscal year 2008 and what percent of total expenses each represents for all hospitals in Massachusetts.



<sup>2</sup> Division of Health Care Finance and Policy-403 Hospital Statement of Costs, Revenues and Statistics (DHCFP-403 cost reports) is a detailed cost report that each Massachusetts-based hospital is required to submit to the Division of Health Care Finance and Policy (DHCFP) each year.



Table 2 below shows the categories of hospital expenses and the percent of total hospital expense that each category represented in 2004 and in 2008.

**TABLE 2: COMPONENTS OF HOSPITAL EXPENSES 2004 & 2008**

(expressed in thousands)	% OF TOTAL		% OF TOTAL	
	FY 2004	EXPENSE	FY 2008	EXPENSE
NON-MD SALARIES AND WAGES	\$6,073,692	44.6%	\$8,153,773	44.0%
MD COMPENSATION	771,613	5.7%	1,098,338	5.9%
FRINGE BENEFITS	1,220,595	9.0%	1,739,427	9.4%
PURCHASED SERVICES (NON-PAYROLL LABOR)	830,471	6.1%	1,293,252	7.0%
<b>SUBTOTAL - LABOR RELATED EXPENSES</b>	<b>\$8,896,371</b>	<b>65.3%</b>	<b>\$12,284,789</b>	<b>66.2%</b>
FOOD AND FOOD SERVICE SUPPLIES	\$80,936	0.6%	\$88,603	0.5%
MEDICAL SUPPLIES	225,085	1.7%	282,699	1.5%
DRUGS	225,992	1.7%	201,398	1.1%
OTHER SUPPLIES AND EXPENSES	2,910,723	21.4%	3,985,283	21.5%
PROFESSIONAL LIABILITY INSURANCE	37,575	0.3%	43,000	0.2%
<b>SUBTOTAL - PATIENT CARE SUPPLIES</b>	<b>\$3,480,313</b>	<b>25.5%</b>	<b>\$4,600,982</b>	<b>24.8%</b>
UTILITIES AND PLANT OPERATIONS	\$310,818	2.3%	\$503,837	2.7%
TOTAL DEPRECIATION AND AMORTIZATION	726,778	5.3%	907,167	4.9%
INTEREST	215,302	1.6%	252,487	1.4%
<b>TOTAL</b>	<b>\$13,629,583</b>	<b>100%</b>	<b>\$18,549,260</b>	<b>100%</b>

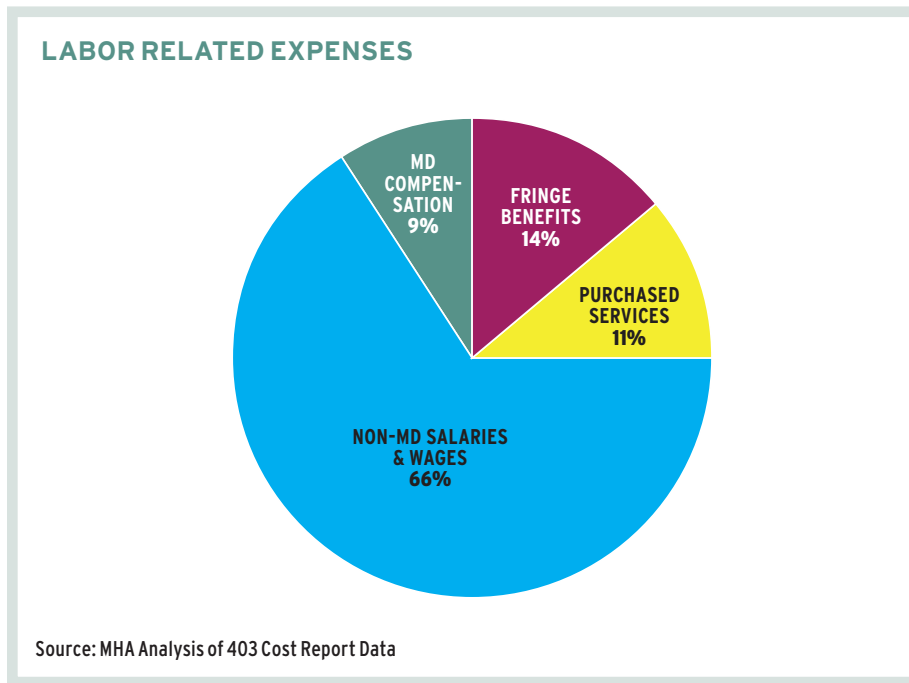
Source: MHA Analysis of 403 Cost Report Data.

## Hospital Expenses Can Be Divided Broadly Into:

- >> Labor related expenses-including salaries and wages of non-physician staff, physician compensation, fringe benefits and purchased services
- >> Patient care supplies
- >> Depreciation, interest and plant operations

## Labor and Labor-Related Expenses

Labor related expenses include non-physician salaries and wages, physician compensation, fringe benefits and purchased services. All of these are represented in the pie chart below and discussed in detail in the following section:



### A. Salaries and Wages of Non-Physician Staff

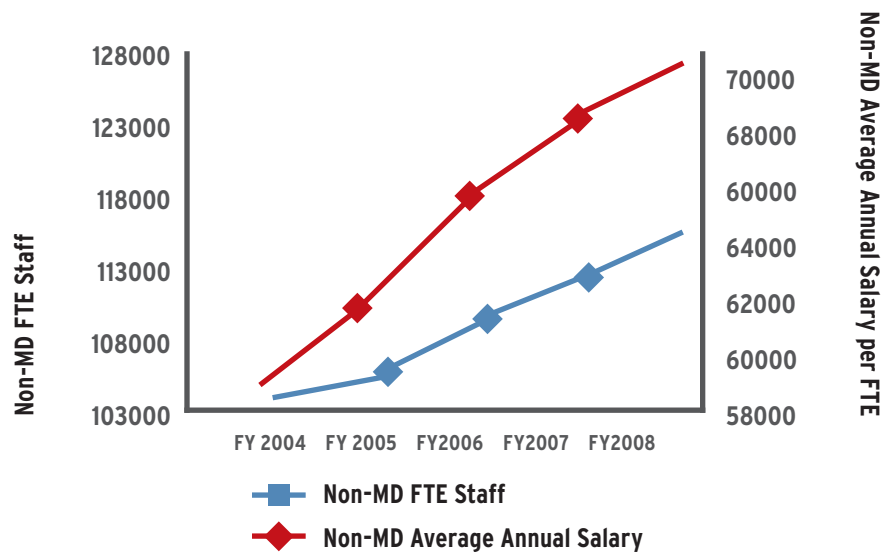
The salaries and wages of non-physician staff include direct caregivers and support staff. Direct caregivers include registered nurses, practical nurses, nursing assistants, therapists, pharmacists, technicians and technologists. Other staff salaries and wages represent educators and managers, environmental service workers, food preparation workers and information technology specialists. They include the business operations staff and the executive management team.

Massachusetts acute care hospitals paid non-physician employees \$6.1 billion payroll dollars in FY 2004 and that figure grew to \$8.2 billion by FY 2008. In FY 2004, hospitals employed about 103,100 full-time equivalent non-physician staff members. By FY 2008, the number of full-time equivalent non-physician staff members had grown to nearly 115,000 - an 11.5% increase. From FY 2004 to FY 2008, the average annual compensation of a full-time equivalent non-physician staff member grew from about \$59,000 to nearly \$71,000 - a 20.5% increase (5.1% on average annually).

#### **These combined changes are attributable to several factors including:**

- Long-term shortages in key healthcare professions and competition among healthcare providers for labor tends to drive up prices in the labor market. The U.S. Department of Health and Human Services' Health Resources and Services Administration (HRSA) has been tracking the nursing shortage for two decades. Although the RN vacancy rate has diminished somewhat, HRSA is anticipating workforce shortages through the year 2030. Nursing aides, home health aides and other supplemental nursing personnel are also expected to remain scarce. Demand in excess of supply has been documented among licensed pharmacists and hospitals report experiencing increasingly difficult recruitment of physical and occupational therapists.
- Conversion of contract labor positions to employed staff positions with compensation adjustments to achieve the conversion;
- Increases in total positions needed to support changes in medical care standards, comply with new quality-based initiatives and adopt new patient safety protocols;
- Employment of patient financial counselors to guide patients through their coverage options under healthcare reform

### CHANGE IN NON-MD FTEs & NON-MD AVERAGE ANNUAL SALARY PER FTE 2004-2008



Massachusetts hospitals have remained relatively efficient in terms of labor costs in comparison to their peers nationwide. In 2007, Massachusetts hospitals' median FTEs per occupied bed was 74% of the national median.

According to the *Almanac of Hospital Financial and Operating Indicators* (Ingenix, 2009), Massachusetts hospitals have been leaders in the Northeast Region in controlling salary costs per discharge in each of the five years from FY 2003 to FY 2007 (latest year available).

**TABLE 3: MEDIAN SALARY COST PER DISCHARGE (Case Mix and Wage Index Adjusted)**

	SALARIES PER DISCHARGE (Wage Index and Case Mix Adjusted)				
	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
U.S. HOSPITALS - ALL	\$2,209	\$2,265	\$2,317	\$2,388	\$2,455
NORTHEAST REGION (Including CT, MA, ME, NH, NJ, PA, RI, VT)	2,291	2,346	2,396	2,454	2,529
MASSACHUSETTS HOSPITALS	1,939	2,177	2,168	2,316	2,387
MASSACHUSETTS OVER/(UNDER) REGION	\$(352)	\$(169)	\$(228)	\$(138)	\$(142)
	-15%	-7%	-10%	-6%	-6%

Source: Almanac of Hospital Financial and Operational Indicators (Ingenix, 2009)

Still, labor costs remain the largest portion and driver of hospital costs.

## Nursing Staff

As shown in Table 4 below, among Massachusetts hospitals, nursing staff as a percentage of total non-physician salaries and wages rose from 36.8% in 2004 to 41.0% in 2008 while other staffing categories dropped as a share.

**TABLE 4: NON-MD SALARIES AND WAGES 2004 & 2008**

(expressed in thousands)	FY 2004			% OF TOTAL	% CHANGE
	FY 2004	EXPENSES	FY 2008	EXPENSES	OVER 4 YEARS
NURSING STAFF (RN, LPN, CAN)	\$2,236,433	36.8%	\$3,340,169	41.0%	49.4%
ALL OTHER HOSPITAL STAFF	3,837,259	63.2%	4,819,603	59.0%	25.6%
TOTAL NON-MD SALARIES AND WAGES	\$6,073,692	100.0%	\$8,153,771	100.0%	34.2%

Source: MHA Analysis of 403 Cost Report Data

- **Total nursing salaries and wages grew by just under 50% over the 4 year period.**
- All other (non-nursing, non-physician) staff wages grew by only 25.6% (just under \$1 billion) from FY 2004 to FY 2008, an annual average of 6.4%.

As shown in Table 5:

- **Wages paid to RNs increased by 50.2% from FY 2004 to FY 2008 - an increase of just under \$1 billion,** attributable to both increases in hourly rates (33.6%) and total hours paid (12.4%).
- **Other (non-RN) nursing staff wages grew by 45.1%** - an additional \$165 million.

**TABLE 5: NURSE STAFFING EXPENSES BY TYPE OF NURSING STAFF**

NURSING SALARIES AND WAGES (expressed in thousands)	FY 2004		FY 2008		% INCREASE/(DECREASE)	
	\$	HOURS	\$	HOURS	\$	HOURS
REGISTERED NURSES SALARIES AND WAGES	\$1,871,124	58,470	\$2,810,246	65,710	50.2%	12.4%
LICENSED PRACTICAL NURSES SALARIES AND WAGES	44,308	2,141	45,781	1,908	3.3%	-10.9%
CERTIFIED NURSING ASSISTANTS SALARIES AND WAGES	99,296	8,290	157,507	10,766	58.6%	29.9%
SUBTOTAL	2,014,728	68,901	3,013,534	78,384	49.6%	13.8%
OTHER NURSING SALARIES AND WAGES	221,705		326,635		47.3%	
TOTAL NURSING SALARIES AND WAGES	\$2,236,433		\$3,340,169		49.4%	
<b>NURSING STAFF SUMMARY</b>						
REGISTERED NURSES SALARIES AND WAGES	\$1,871,124	58,470	\$2,810,246	65,710	50.2%	12.4%
ALL OTHER NURSING STAFF	365,309		529,923		45.1%	
TOTAL NURSING SALARIES AND WAGES	\$2,236,433		\$3,340,169		49.4%	

Source: MHA Analysis of 403 Cost Report Data

Hospitals, in compliance with quality and safety mandates and pay-for-performance incentives have to compete for labor in the face of an ongoing workforce shortage that tends to drive up prices in the labor market.

## B. Physician Compensation

Hospitals pay physicians for a number of things including administrative services, supervision of staff, teaching of interns, residents and other professionals, and direct patient care services. They may also be paid for non-patient care related activities such as research.

**Note that Physician Compensation on Table 2 reflects only a portion of the financial resources required to provide adequate physician coverage across all essential specialties.** Much of the financial resources related to physician compensation reside on the books of hospital management companies, corporate parents, physician/hospital affiliates and other entities based on organizational structure and appropriate accounting conventions. These are not included in the source data cost reports from which this report's figures were derived.

Hospitals have had to devote considerable financial resources to ensure that their communities have the optimal complement of physicians. As many as 76% of respondents to a recent MHA survey reported having to expend additional financial resources in 2009 to retain and recruit physicians in their communities. In today's market, physicians' expectations include base compensation, additional payments for on-call services, fees for inpatient consultative services and stipends for participation on hospital committees. Additional start-up costs are likely to be incurred by the hospital for newly recruited physicians including office space and outfitting and acquisition of specialty equipment. Several hospitals reported having to recruit hospitalists to provide bedside care to physicians' hospitalized patients involving additional hospital-paid staff and/or additional subsidization of physician practices. One hospital reported cutting back on other investments to retain and recruit physicians.

In testimony on Provider and Insurer Costs and Cost Trends, one hospital in Western Massachusetts reported that it had invested more than \$5 million during the past 5 years to replenish the supply of primary care and specialty physicians available to its community – \$2.9 million of that amount were funds advanced to independent community practices to assist in establishing new physicians in the area. One hospital system reported it has a "Primary Care Loan Repayment Program" designed to attract primary care providers to its community health centers. In its testimony, another hospital pointed out that "While Massachusetts has a high physician to population ratio," the area where the hospital is located "currently has shortages in both primary care and specialty care. Many primary care providers are not accepting new patients and consultant reports have identified specialty shortages."

## C. Fringe Benefits

Fringe benefits increased by 42.5% from FY 2004 to FY 2008, an average annual increase of 10.6%. Fringe benefits include the employers' share of payroll taxes (FICA, Medicare), unemployment insurance, and employee health, dental, life insurance and retirement benefit programs.

A considerable portion of the 42.5% increase in annual fringe benefit expenses from 2004 to 2008 reflects changes in health insurance coverage for employees and their dependents. The vast majority of acute care hospitals in Massachusetts have converted to self-insured employee health programs, providing some cost saving opportunity and enabling the hospital to exert some control over the expense. Some self-insured hospitals have developed programs to encourage employees to use their facilities for their healthcare needs, enhancing the hospital's control over the cost and delivery of medical care to their employees. Many hospitals have had to shift more of the premium to the employee and/or institute higher deductibles and co-pays. In either case, hospitals are like other employers in looking for creative but responsible ways to maintain affordable benefit programs.

Fringe benefit expenses also include any defined benefit pension program costs whether those programs are still active or are only maintained for vested retirees. Investment losses in recent years have caused many hospitals' pension funds to fall below required levels and hospitals have been struggling with adjustments to expense and cash reserves in order to maintain the integrity of their pension programs. In the last several years, hospitals' employee retirement programs have been converted to 401(k) and 403 (b) programs. In order to remain competitive in the labor market, hospitals match some portion of employees' personal contributions to such programs.

Tuition reimbursement, discounted public transportation passes and any other supplements to the compensation program are included in fringe benefits. Lastly, for hospitals, the cost of operating an employee health service and the cost of running the Human Resources Department are also included in the fringe benefit cost summary.

## D. Purchased Services (Non-Payroll Labor)

Purchased services increased by 55.7% from FY 2004 to FY 2008, an average annual increase of 13.9%. A very large proportion of the purchased service expenses are fees paid to outside agencies and/or individuals for direct patient care services to hospital patients in nursing, physical and occupational therapy, imaging, respiratory therapy, pharmacy and other areas of the hospital where payroll-based positions cannot be filled.

**The Massachusetts Hospital Association/Massachusetts Organization of Nurse Executives 2008 Survey of Hospital Nurse Staffing Issues in Massachusetts noted the following changes from 2007 to 2008:**

- The RN vacancy rate dropped from 5.3% in 2007 to 4.1% in 2008.
- 31.1% of respondent hospitals said the use of agency staff and “traveler nurses” who are used to fill vacant position at premium rates increased; 21.6% said it stayed the same but the majority, 47.3%, said it decreased.
- Of responding hospitals, 22.5% said RN overtime used to fill vacant positions increased from 2007 to 2008; 45.0% said RN overtime stayed the same, and 32.5% said RN overtime decreased.

Some hospitals engage outside service providers to manage and sometimes staff entire hospital departments and payments made under these arrangements are included in purchased services. The departments most frequently managed and/or manned under contract include environmental services, laundry services, dietary and food services, security, and information technology.

In these situations, hospitals are continuously testing and re-testing the “make or buy” decision based on quantitative and qualitative factors and must frequently challenge the outside vendor of services to do more for less.

Hospitals whose physical plants are aging experience the frequent and costly need to engage outside plumbers, electricians, carpenters and air conditioning specialists on an ad hoc basis. Whether or not to hire such experts to provide on-site coverage throughout one or more shifts must be constantly evaluated.

In some cases, the hospital’s executive management team is employed by an entity related to the hospital and the hospital pays the other entity a portion of the executives’ compensation as a purchased service. Legal and accounting/audit fees and fees to outside consultants are also included in purchased services. Recruitment fees paid to outside agencies to locate, screen and recommend staff to fill payroll-based positions are also included in purchased services.

## Patient Care Supplies and Other Expenses

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**Supplies and other expenses in aggregate increased by 34.7% between FY 2004 and FY 2008; and these make up another 25% or so of Massachusetts hospitals' annual expenses. Supplies and other expenses include:**

- Food and food service supplies
- Medical supplies, instruments and devices
- Minor equipment
- Drugs
- Office supplies and forms
- Educational materials
- Insurances (liability, property, other)
- Other

Hospitals in Massachusetts have been particularly challenged to manage the cost of supplies and other expenses when embedded in those costs are the higher-than-average costs (wages, fuel, etc.) that Massachusetts suppliers incur in making, distributing and delivering goods to Massachusetts hospitals.

**Despite this, significant success has been achieved in reducing drug costs as seen graphically in the next section of this report. Hospitals have achieved reductions in drug costs due to the following:**

- Aggressive negotiations with pharmaceutical suppliers directly and through group purchasing arrangements in which trade-offs such as prompt pay (or even "pre-pay") invoice turnaround by hospitals can produce steep discounts;
- Strict adherence by medical staff members to hospital-approved formularies that maximize the use of generic replacements and limit choices within certain drug classes to facilitate volume purchasing;
- The end of patents on frequently used drugs so that competitive pricing and generic substitution become possible.

### Professional Liability Insurance

While annual increases in the cost of professional liability insurance over 2004 to 2008 have been relatively moderate, the base is high and still represents an obstacle in physician recruitment to private practice. Also, as pointed out in the testimony at the public hearings on Healthcare Costs and Cost Trends, "Medical malpractice reform is often tossed to the side as a politically unappealing issue and one whose results and impact are unquantifiable. Defensive medicine is so inculcated in the manner in which doctors practice medicine that it is truly difficult to extricate its real costs. However, that should not stop us from pursuing change that will ensure patients' rights and change the way doctors practice. Medical malpractice reforms will show a long-term savings in healthcare dollars and it will send a very clear and needed message of support to our physicians."

### Utilities and Plant Operations

There are substantial differences among hospitals in utility expense and plant operations that reflect variations in the size, age and energy efficiency of the physical plant and the type of fuel(s) used for heating, cooling and air handling. Hospitals in Massachusetts are generally older than hospitals elsewhere in the country, but must be maintained in a manner that is comfortable and safe for patients, visitors and staff.



## Capital-Related Expenses

Annual depreciation expense reflects the age and cost of the hospitals' physical assets including buildings, fixtures and major movable equipment. **Low levels of annual depreciation expense could indicate underinvestment in physical plant and aging facilities. It is a worrisome indicator that the median age of plant in Massachusetts was 8% higher than the U.S. median in 2007.** Of course, there is significant variation among Massachusetts hospitals on capital expenditures; many that could afford to, under took modernization and expansion projects throughout the 2004-2008 period.

The following illustrates the depth of the disparity between the age of Massachusetts hospitals in comparison with national and regional peers.

**TABLE 6: MEDIAN CAPITAL COSTS PER INPATIENT DISCHARGE**

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
U.S. HOSPITALS - ALL	\$401.35	\$430.66	\$407.78	\$427.75	\$446.51
NORTHEAST REGION (Including CT, ME, MA, NH, NJ, PA, RI, VT)	353.16	327.26	328.72	343.71	333.67
MASSACHUSETTS HOSPITALS	209.58	207.73	189.71	200.47	205.90
MASSACHUSETTS OVER/(UNDER) REGION	\$(143.58)	\$(119.53)	(139.01)	\$(143.24)	\$(127.77)
	-41%	-37%	-42%	-42%	-38%

Source: Almanac of Hospital Financial and Operational Indicators (Ingenix, 2009)

Based on this comparison, to achieve “par” with hospitals regionally on the basis of age of plant, Massachusetts would need to make a one-time investment of between \$900 million and \$2.2 billion in new capital assets, depending on the type and useful life of the assets acquired. To meet the nationwide benchmark, a one-time infusion of \$1.6 billion to \$4.1 billion in capital acquisitions would have to be made. These are investments above and beyond the annual capital improvements and expansions Massachusetts hospitals are currently paying for in order to catch up.

The position of hospitals in the economic life cycle of the physical assets affects competitive standing, energy efficiency, repair and maintenance costs, patient safety and staff recruitment, just to name a few important considerations. Note that according to the results of a recent MHA survey, many hospitals have postponed and/or dropped capital projects scheduled for FY 2009 and FY 2010 as follows.

**TABLE 7: SURVEY RESPONSES TO CAPITAL PROJECTS STATUS**

SAVINGS INITIATIVE	NUMBER OF HOSPITALS		IMPACT (1-LOW; 10-HIGH)	
	ONE-TIME SAVINGS MEASURE	CONTINUING MEASURE	MEAN	MEDIAN
CAPITAL FACILITY PROJECTS POSTPONED/CANCELED	7	25	5.9	6.5
INFORMATION TECHNOLOGY PROJECTS POSTPONED/CANCELED	10	18	4.8	4.5
CLINICAL TECHNOLOGY PROJECTS POSTPONED/CANCELED	6	21	4.9	5.5

Source: MHA Survey of Member Hospitals

Interest expense among Massachusetts hospitals generally represents long-term borrowings for buildings and equipment rather than working capital borrowings. The moderate increase from 2004 to 2008 shown in Table 2 directly reflects the affordability of rates in recent years - and indirectly reflects the limitations on access to capital that hospitals considered high credit risks experience.

## PART 2: Increase in Hospital Expenses: Retrospective Review; FY 2004 - FY 2008

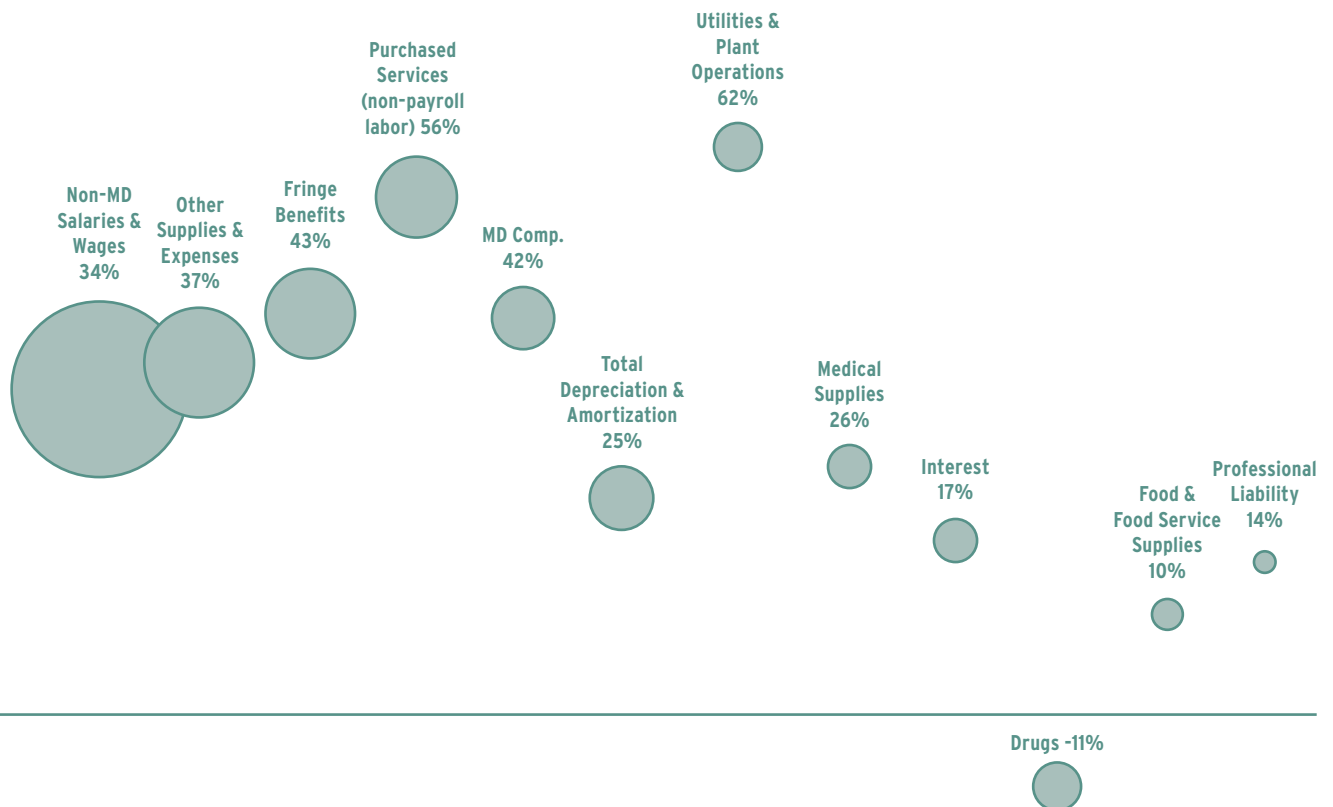
Based on cost report data submitted to the Massachusetts Division of Health Care Finance and Policy by acute care hospitals in Massachusetts, total hospital expenses and overall change in expenses in FY 2004 through FY 2008 were as shown in Table 8 below.

**TABLE 8: INCREASE IN TOTAL HOSPITAL EXPENSES 2004-2008**

(expressed in thousands)	TOTAL OPERATING EXPENSES	PROVISION FOR BAD DEBTS	TOTAL EXPENSES PER FINANCIAL STATEMENTS	ANNUAL INCREASE	
				\$	%
FY 2004	\$13,629,582	\$530,970	\$14,517,244		
FY 2005	14,701,957	502,712	15,535,055	\$1,017,811	7.0%
FY 2006	16,050,041	524,310	16,961,155	1,426,100	9.2%
FY 2007	17,168,833	534,199	18,095,838	1,134,683	6.7%
FY 2008	\$18,549,260	\$529,048	\$19,533,816	\$1,437,978	7.9%

Source: MHA Analysis of 403 Cost Report Data

The increase in expenses by category is shown in the bubble chart below, where the size of the bubble represents the relative proportion of total expense the component represents and the height on the Y-axis represents the change in expense for that category from 2004 to 2008.



# Annual Increases in Expenses – The Influence of Volume, Inflation & Product Mix

## Changes in hospitals' annual expenses generally reflect the following:

- > Volume: Fluctuations in patient service volume;
- > Inflation: Inflation in the prices of the products and services hospitals utilize in the production and delivery of medical care;
- > Mix: Changes in the product and mix of services hospitals utilize in the production and delivery of medical care.

## PATIENT SERVICE VOLUME – FY 2004 THROUGH FY 2008

### Inpatient Volume

Some change in hospital expenses is driven by fluctuations in patient volume. Statistics on inpatient volume are relatively straight forward and are reported with a high level of uniformity among hospitals as:

- > Patient days by service, by payer or by DRG;
- > Patient admissions by service, by payer or by DRG;
- > Patient discharges by service, by payer or by DRG;
- > Average case mix index;
- > Average length of stay;
- > Average occupancy rate;
- > Other

As shown in Table 9, utilization of inpatient hospital services for all patients in Massachusetts in terms of both inpatient discharges (cases) and inpatient days (length of stay) has been relatively "flat" from FY 2004 to FY 2008. This comports with the conclusions of the DHCFP report:

"Most of the growth in average spending for inpatient care from 2006 to 2008 was associated with increased spending per inpatient day. Spending per inpatient day grew nearly 9 percent from 2006 to 2007 and more than 7 percent from 2007 to 2008, while both the rate of admissions (per member year) and the average length of stay grew modestly, if at all."

– DHCFP report: *Massachusetts Health Care Cost Trends Part III: Health Spending Trends for Privately Insured 2006-2008*

TABLE 9: INPATIENT VOLUME 2004-2008

	FY 2004	FY 2008	4-YEAR CHANGE %
TOTAL INPATIENT DAYS	4,127,317	4,119,873	-0.2%
TOTAL INPATIENT DISCHARGES	848,471	856,041	0.9%
AVERAGE LENGTH OF INPATIENT STAYS	4.86	4.81	-1.1%
NEWBORN DELIVERIES	94,001	77,676	-17.4%

Source: D403 Cost Reports as compiled by DHCFP, FY 2004 through FY 2008.

### Outpatient Volume

Outpatient statistics, however, are not uniformly counted by hospitals so they are not uniformly reportable by hospitals. For example, lab services can be counted as tests or CAP ("College of American Pathology") workload units. Physical Therapy can be counted in modalities or visits. Surgeries can be counted in minutes in the operating room or procedures. Even surgical procedures will not reconcile with surgical cases because quite frequently more than one procedure is performed during a single case.

Even with these limitations, using hospitals' cost report data, outpatient volume shows a moderate increase over the 4-year period as shown in Table 10.

**TABLE 10: OUTPATIENT VOLUME 2004-2008**

	FY 2004	FY 2008	4-YEAR CHANGE %
OBSERVATION DAYS	155,355	173,215	11.5%
EMERGENCY ROOM VISITS	2,921,039	3,153,467	8.0%
CLINIC VISITS	7,601,387	8,241,868	8.4%
AMBULATORY SURGERY	571,656	548,432	-4.1%

Source: D403 Cost Reports as compiled by DHCFP, FY 2004 through FY 2008.

**Some important observations about outpatient volume:**

- There was an aggregate 8% increase in **emergency room visits** over a 4-year period but as noted above, inpatient utilization was flat during that period.
  - One hospital offered important commentary on this phenomenon at the public hearings on cost and cost trends: “The [DHCFP] report points out that the rate of emergency room visits in Massachusetts is 23% higher than in the U.S. Many have argued that health insurance coverage and higher deductibles for emergency room visits would provide coverage and incentives to patients not to utilize the emergency room. Clearly, the facts are demonstrating something else. Emergency room visits have increased. For this hospital, “the number of emergency visits increased 4.2% from FY 2008 to FY 2009. This happened in spite of the fact that 97% of the population now has health insurance. Clearly there are not sufficient resources for these patients to obtain care, particularly after-hour care.”
- The 4.1% decrease in hospital-based **ambulatory surgery cases** may be offset by increases in procedures among other segments of the delivery system, including private ambulatory surgery centers and physicians’ offices. The recent DHCFP report, however, indicated that outpatient services at freestanding facilities are declining.<sup>ii</sup>
- Reclassification of services to outpatient:
  - In testimony presented at the public hearings on cost and cost trends, one hospital offered this explanation: “The increases in both volume and service intensity [for outpatients] are heavily influenced by payer pressures to reclassify certain services previously classified as inpatient services to outpatient services for payment purposes.” For example, during this period, this hospital “experienced an annual rate of increase of approximately 10% in the volume of outpatient cardiology services and a 20% increase in the volume of outpatient observation cases, specifically related to the reclassification from inpatient to outpatient asserted by payers.”
- Evidence of outpatient volume change can be found from other sources that indicate strong growth in hospital outpatient volume:
  - The Division of Health Care Finance and Policy stated that the “growth in the number of hospital outpatient services per member month accelerated sharply—rising 4% from ‘06 to ‘07 and 8% from ‘07 to ‘08” for the privately insured. (*MA Health Care Cost Trends Part III: Health Spending Trends for Privately Insured ‘06 - ‘08*)
  - **MassHealth outpatient utilization has increased significantly.**
  - Available data on MassHealth outpatient episodes indicates a 22% increase from FY 2004 to FY 2008. MassHealth reimburses hospitals for a single rate for all outpatient services (except lab) provided in a single calendar day. Unlike other data sources, these one day outpatient “episodes” of care can be tracked with some uniformity among hospitals.

MASSHEALTH OUTPATIENT EPISODE AND RELATED ENROLLMENT CHANGES		
	EPISODE CHANGE	ENROLLMENT CHANGE
FY 2004 - FY 2005	8.1%	-0.9%
FY 2005 - FY 2006	4.1%	-1.2%
FY 2006 - FY 2007	4.7%	3.5%
FY 2007 - FY 2008	3.8%	2.6%
FY 2004 - FY 2010	22.4%	4.0%

For purposes of the calculating the annual enrollment change, MHA only counted the MassHealth Primary Care Clinician, Fee-For-Service, CommonHealth Non-Premium Assistance, and Third-Party Liability populations. Enrollment based on April 2010 snapshot report. Outpatient episodes based on data provided by MassHealth in the ‘10 and ‘09 acute hospital RFAs.

- MassHealth enrollment has changed during this period (both increases and decreases), but there does not seem to be a direct correlation between enrollment changes and utilization. Populations that are covered by the single outpatient payment (known as the Payment Amount Per Episode (PAPE)), first declined before increasing during the FY 2004 - FY 2008 period. The annual percentage change in the number of outpatient episodes always exceeded the percentage change in the population whose outpatient services are paid by MassHealth on the basis of the PAPE methodology.

# Adjusted Patient Days

For purposes of this study, **adjusted patient days** are used as a measure of aggregate volume in order to measure hospital costs on the basis of a unit of production or a unit of service, though this method of aggregating outpatient and inpatient volume has some well-documented limitations<sup>iii</sup>. One weakness is that this methodology significantly underweights outpatient volume.

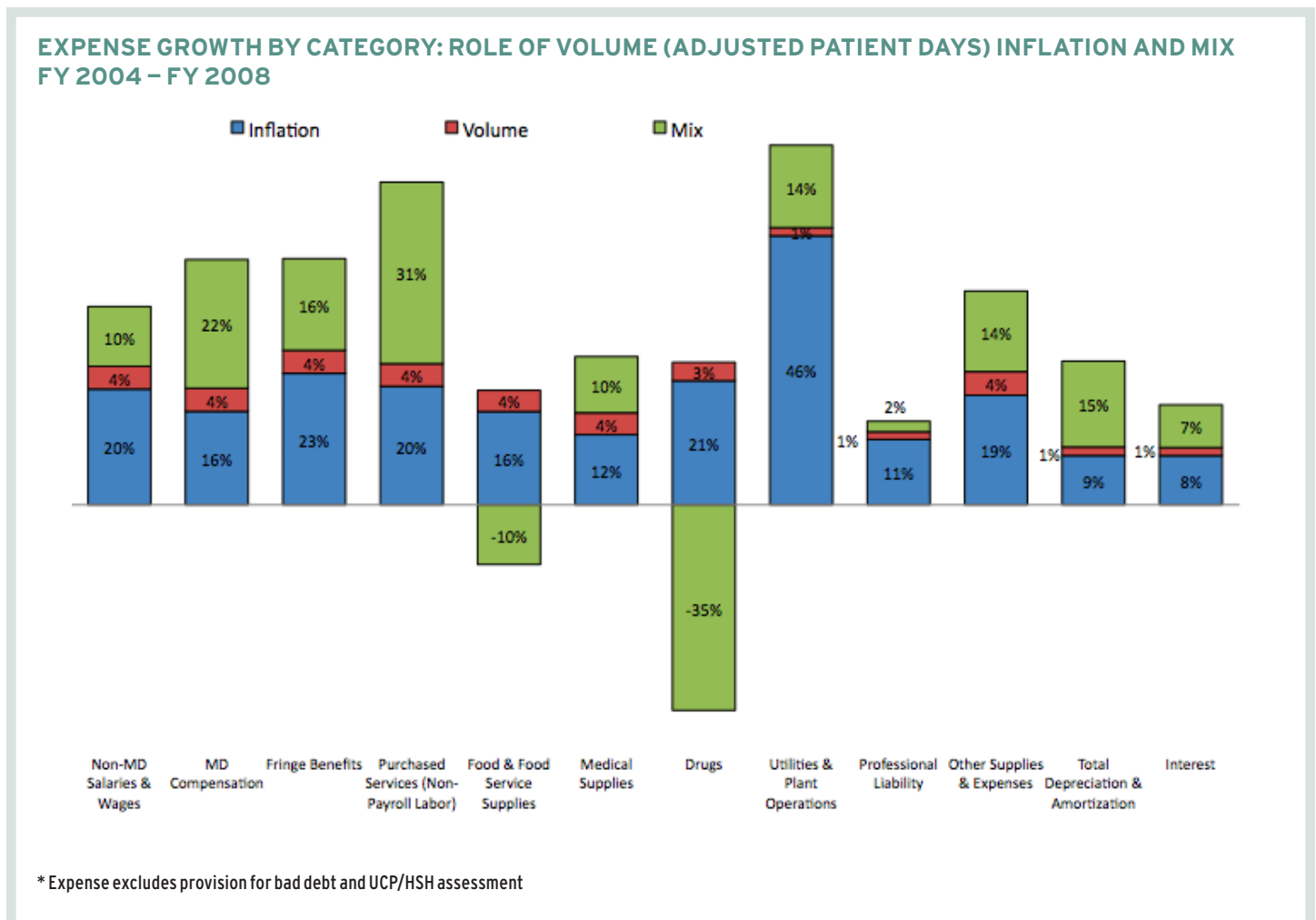
As described above, hospital inpatient expenses are frequently expressed on a “per patient day” (“per diem”) basis. To obtain a proxy for a “universal” hospital unit of service in a way that relative values are maintained outpatient services in aggregate are converted to inpatient day equivalents using the adjusted patient day calculation.

Where adjusted patient days are used in this report they were consistently calculated as follows:

$$\frac{\text{Total Net Patient Service Revenue}}{\text{Inpatient Net Patient Service Revenue}} \times \text{Inpatient Days} = \text{Adjusted Patient Days}$$

► Massachusetts hospitals’ patient service volume, *as measured by adjusted patient days* increased by 4.0% from 2004 to 2008.

Using adjusted patient days as a measure of volume, hospital expense growth by category from 2004 to 2008, and the influence of *volume, inflation and mix is illustrated graphically below* and detailed in Table 11.



**TABLE 11: CHANGES IN HOSPITAL EXPENSE BY CATEGORY & INFLUENCE OF VOLUME (Adjusted Patient Days), INFLATION AND MIX**

(expressed in thousands)	FY 2004	FY 2008	% CHANGE OVER 4 YEARS			
			VOLUME	INFLATION	MIX	TOTAL
NON-MD SALARIES AND WAGES	\$6,073,692	\$8,153,771	3.9%	20.0%	10.3%	34.2%
MD COMPENSATION	771,613	1,098,338	4.0%	16.1%	22.2%	42.3%
FRINGE BENEFITS	1,220,595	1,739,427	4.0%	22.7%	15.8%	42.5%
PURCHASED SERVICES	830,471	1,293,252	3.9%	20.5%	31.4%	55.7%
<b>SUBTOTAL - LABOR RELATED</b>	<b>\$8,896,371</b>	<b>\$12,284,789</b>	<b>3.9%</b>	<b>20.1%</b>	<b>14.1%</b>	<b>38.1%</b>
FOOD AND FOOD SERVICE SUPPLIES	\$80,936	\$88,603	3.7%	16.1%	-10.3%	9.5%
MEDICAL SUPPLIES	225,085	282,699	3.8%	12.1%	9.7%	25.6%
DRUGS	225,992	201,398	3.2%	21.4%	-35.5%	-10.9%
UTILITIES/PLANT OPERATIONS	310,818	503,837	1.4%	46.4%	14.2%	62.1%
LIABILITY INSURANCE	37,575	43,000	1.3%	11.3%	1.8%	14.4%
OTHER SUPPLIES AND EXPENSES	2,910,723	3,985,283	4.1%	18.9%	13.9%	36.9%
DEPRECIATION/AMORTIZATION	726,778	907,167	1.5%	8.5%	14.8%	24.8%
INTEREST	215,302	252,487	1.4%	8.5%	7.4%	17.3%
	<b>\$13,629,583</b>	<b>\$18,549,260</b>	<b>3.7%</b>	<b>19.5%</b>	<b>12.9%</b>	<b>36.1%</b>

Source: MHA Analysis of 403 Cost Report Data

## Inflation

Inflation is measured each year based purely on the prices of hospital inputs without regard to changes in mix of inputs or the introduction of new products or services. The last five years have been a period of moderate price inflation for hospitals in almost every area except salaries and wages and the cost of recruiting and retaining physicians. Each year, in consultation with an economist specializing in healthcare cost analyses, MHA publishes an analysis of the most recently completed fiscal year's actual inflation and a forecast of inflation for the upcoming budget year. The following table represents the final published numbers for the years between 2004 and 2008:

**TABLE 12: MHA INFLATION PROJECTIONS 2004-2008**

COST CATEGORY	MHA INPUT PRICE INFLATIONS				2004-2008 CUMULATIVE INPUT PRICE INFLATION
	FY 2005	FY 2006	FY 2007	FY 2008	
1. WAGES	4.70%	5.80%	3.00%	4.40%	19.12%
2. FRINGES	5.90%	6.90%	3.40%	3.50%	21.15%
3. MEDICAL FEES	3.60%	3.60%	3.80%	3.30%	15.08%
4. FOOD	3.50%	3.80%	3.90%	4.40%	16.53%
5. DRUGS	4.80%	7.50%	5.60%	6.60%	26.82%
6. MEDICAL SUPPLIES	2.80%	3.60%	1.90%	3.00%	11.78%
7. BUSINESS SERVICES	2.60%	3.10%	5.80%	5.40%	17.96%
8. DATA PROC. SERVICES	3.10%	0.50%	5.60%	4.90%	14.78%
9. PURCHASED SERVICES	1.90%	1.20%	2.90%	4.20%	10.57%
10. FUEL & UTILITIES	7.80%	16.80%	1.80%	12.10%	43.69%
11. MISCELLANEOUS	1.90%	3.00%	2.80%	1.90%	9.95%
<b>TOTALS</b>	<b>4.30%</b>	<b>5.40%</b>	<b>3.10%</b>	<b>4.10%</b>	<b>17.99%</b>

Source: Hosp Cost Inflation Projections

These input price inflation projections capture only the inflation of the prices of goods and services that Massachusetts hospitals purchase. They do not account for total growth in expenses hospitals experience, which is a composite of price inflation, volume and product mix.

### **Hospital Expense Increases Due to Changes in Mix**

Other annual cost increases that represent neither inflation nor volume changes approached \$1 billion over the 4-year period from FY 2004 to FY 2008 and they can be attributed to a variety of factors.

**“Other” increases in salary and wage expenses reflect 11,800 more full-time equivalent hospital staff members from FY 2004 to FY 2008. These new position positions represent:**

- Changes from contract positions to staff positions as the healthcare labor market evolved;
- New hospital services and programs;
- Expansion of security and environmental services to meet patient and employee safety needs;
- New work processes that have developed to ensure patient safety and raise the bar on hospital care quality standards that frequently require additional staff and/or more expertly trained staff. Examples provided by testimony at the public hearings include:
  - “Our staff has prevented 744 cases of Ventilator Associated Pneumonia (VAP) over three years at a cost of \$20,000 per case.”
  - “The rate of central line infections dropped from 4.14 to 0.52 cases per 1,000 patient days between ‘03 and ‘09.”
  - “Between 2006 and 2008 we experienced shortages in areas such as radiology technicians and RNs, which impacted wages and training costs for new employees.
  - Our hospital “has recently begun implementation of a strong platform for complex care and management for high cost patients...launched a groundbreaking multi-stakeholder initiative – a program to improve community-based services to the 2,000 most medically complex and high cost Medicaid patients.”
  - In many anecdotal comments, MHA has heard that there has been an increasing need for patient “sitters” who provide 1:1 in-room patient monitoring to avoid falls and keep patients safe. Hospitals are working on better strategies to improve patient safety e.g. redefining the role of patient sitters, more frequent patient rounding and increased patient and staff education.
- Expansion of administrative work processes primarily in response to changes in federal, state and private payer claims processing and reporting requirements, audits and new accreditation-related requirements:
  - As carefully articulated by one hospital in its Cost and Cost Trend testimony: “Providers need to hire football fields of people to track down payments from patients” as insurance companies make it difficult to collect deductibles and co-insurance at the point of service.
  - the transition from a grant-based uncompensated care program in Massachusetts to the claim-based health safety net program, which has led to increased administrative complexity;
  - preparation for federal Recovery Audit Contractor (RAC) reviews of medical records and patient invoices with strict turn-around time requirements adds an incremental new cost;
  - preparation for private payer audits of medical records and other documentation which has been a burden of increasing magnitude on hospitals over the last several years with none of the restrictions on volume of requests that guide the RAC audits;
  - the significant expansion of federal IRS reporting requirements for tax-exempt entities has added another new administrative burden.
- Expanded Case Management efforts to control inpatient hospital admissions and effectuate appropriate length of stay determinations.

**Non-wage-related increases in hospital expenses that represent neither inflation nor patient volume fluctuations but focus more on patient safety and the quality of care include the following:**

- Essential investments in information technology to implement electronic medical records and physician order entry systems as well as to prepare for electronic health records. In its testimony before DHCFP and the Attorney General, one hospital reported that it is investing \$90 million in upgrading its information systems in order to have a fully installed and integrated electronic medical record.
- The additional costs that are incurred as hospital buildings age and funds to update or replace systems are unavailable.
- Many equipment purchases relate to protecting patients. For example, an automated medication inventory carousel for pharmacies not only hastens inventory turn-over and diminishes expired drugs, but also provides a safe method of dispensing medications. The cost including building modifications may exceed \$500,000. Other equipment to safeguard infants cost around \$100,000.



## PART 3: Payment Shortfalls Under Public Health Coverage Programs

Government underpayment to health care providers is a widely known financial problem. State programs for low-income individuals such as MassHealth and the Health Safety Net, as well as the federal Medicare program reimburse hospitals below the cost of care in the aggregate as many hospitals testified at the recent public hearings on health care provider costs. It is important to note that, without exception, every hospital that submitted testimony at or for the recent public hearings conducted by the Division of Health Care Finance and Policy on Health Care Provider and Payer Costs and Trends named shortfalls under public entitlement programs (primarily Medicare, Medicaid and the Health Safety Net program) among the issues with which they were most concerned.

In the current market, hospitals attempt to cover these expenses by cost-shifting to private payer insurers to the extent possible. Otherwise, unfunded expenses would result in reductions in services, workforce, and investment. It is important to note that not all hospitals currently have the means to make up this difference. Hospitals that have a higher than average Medicare/MassHealth caseload do not necessarily have the negotiating muscle to be made whole under private payer contract rates.

1. For **MassHealth** members enrolled in the Primary Care Clinician plan and others not enrolled in a private health insurance plan or Medicare, MassHealth reimburses hospitals through a contract known as the "Request for Applications." For 2008, MHA estimates that hospitals were reimbursed 85.8% of cost. However, due to the state's financial challenges, hospitals have experienced significant reductions in their reimbursement rates. MHA currently estimates that acute hospitals will be paid on average approximately 75% of cost in FY 2010, and will most likely experienced lower reimbursement in FY 2011.
2. **Health Safety Net** reimbursement is a problem for many hospitals. The Division of Health Care Finance and Policy reported that the Health Safety Net reimbursed hospitals 92 percent of cost in FY 2008 and FY 2009. This percentage does not reflect the funding contributed by hospitals themselves, nor any funding shortfalls which are assigned to hospitals.
3. For years, **Medicare** payment policy has been aimed at lowering program costs by reducing payments to providers - particularly acute-care, hospitals. MHA estimates that the Medicare program reimbursed hospitals 92.7% of cost in the aggregate in FY 2008, a payment level that is projected to worsen going forward.

Costs such as wage increases, rising utility prices and other effects of inflation are not fully accounted for in the annual update to Medicare payments or Medicaid programs. Hospital's inability to receive payments for services that meet their costs has led to a continual erosion of their margins.

Table 13 below compares the inflation rates that have impacted hospitals' expenses with the public payers' payment rate adjustments for "inflation."

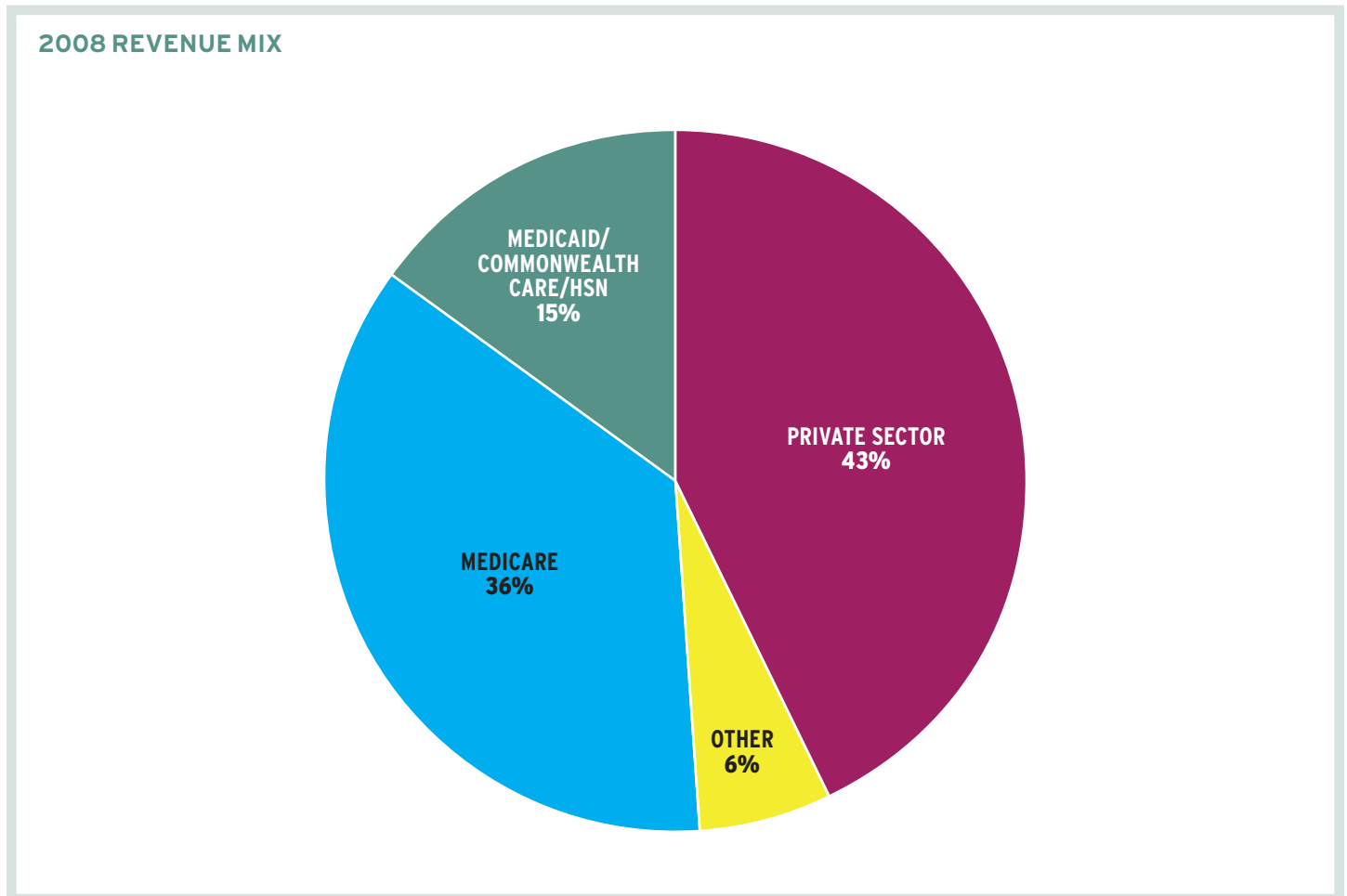
**TABLE 13: MHA INFLATION FACTORS AND PUBLIC PAYER RATE ADJUSTMENTS**

	MHA INFLATION COMPOSITE (WEIGHTED)	MEDICARE RATE ADJUSTMENT - OPERATING	MASSEALTH INFLATION ADJUSTMENT
FY 2005	4.3%	3.3%	1.8%
FY 2006	5.4%	3.7%	1.6%
FY 2007	3.1%	3.4%	3.3%
FY 2008	4.1%	3.3%	3.0%
FY 2009	3.4%	3.6%	1.4%
FY 2010	4.0%	2.1%	0.7%

Source: MHA Inflation Factors from Hospcost projections; Medicare Updates from CMS website

Compounding year to year, it is easy to see why and how shortfalls under public payment systems have handicapped even the most efficient hospitals. Considering how much more vulnerable hospitals are that serve a disproportionate share of elderly and indigent patients, the matter has become a significant concern as the payment rates have deteriorated.

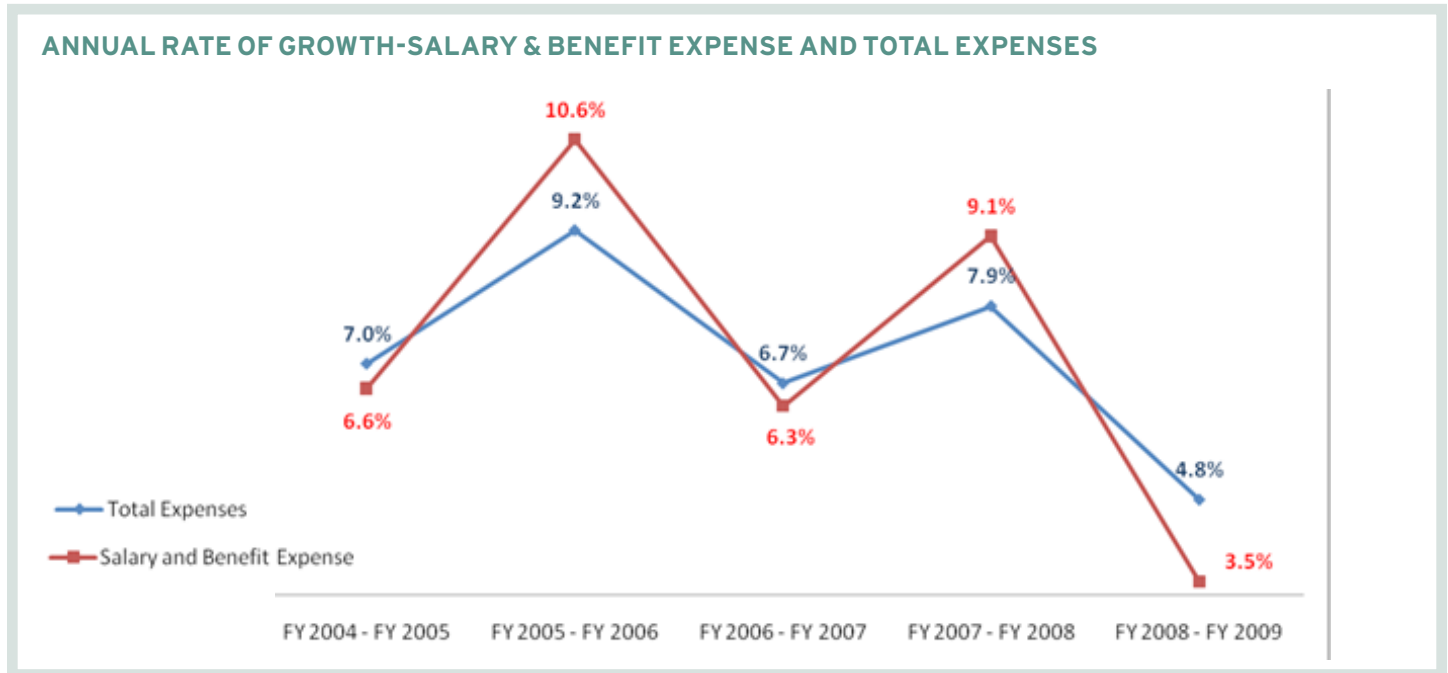
As the population ages and with the increasing need to help low-income residents with health insurance coverage, the portion of the population covered by government funded health care programs will likely grow in number. This puts pressure not only on hospital operations, but also privately insured patients. The pie chart below shows the current population mix between government and private payers for Massachusetts acute hospitals.



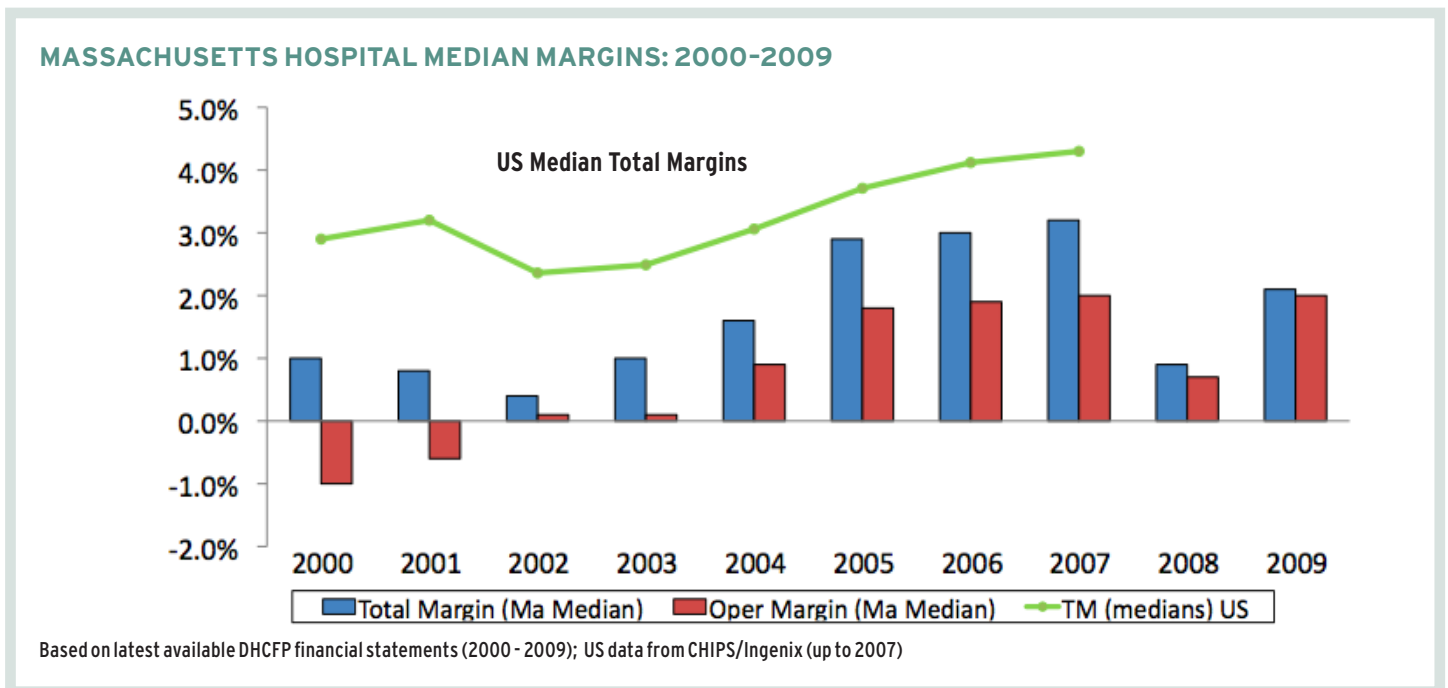
## PART 4: Preview – FY 2009 and Outlook for 2010

As reported in *Health Affairs*, in 2008, U.S. healthcare spending growth slowed to 4.4 percent – the slowest rate of growth over the past 48 years. Spending on hospital care declined to 4.5% in 2008. In Massachusetts, there has been a similar decline in the rate of growth of hospital expenses; between 2007 and 2008, total expenses grew by 7.9 percent; but between FY 2008 and FY 2009 the rate of total expense growth slowed to 4.8%.

As shown in the graph below, salary and benefit expense is the primary driver of hospital expense growth:



The bar chart below shows median total and operating margins for acute care hospitals in the state from 2000 to 2009. The median operating margin in 2008 was 0.7%. In 2009, some Massachusetts hospitals, through cost management and by seeking efficiencies and cutting expenses were able to eke out a positive operating margin, hence the improvement seen in the chart below, with a median operating margin in 2009 of 2.0%. Some of the cost cutting steps taken, however, were one-time only options that cannot be repeated going forward.



Further detail on operating and total margins in FY 2008 and FY 2009 is provided in Table 14 below. Hospitals in the bottom quartile have razor thin operating and total margins and nearly 30% of hospitals reported declining margins.

It is worth noting here that an industry rule of thumb is that an operating margin of 3-5 percent is considered “healthy.” As noted in *Health Affairs*: “When a hospital organization fails to produce an operating margin that is sufficient to fund capital needs, deterioration to a point of non viability may be slow or rapid depending on a variety of factors.” In 2008, only 22% hospitals in the state had an operating margin equal to or greater than 3%; that number increased to 38% in 2009. And, as observed earlier, Massachusetts hospitals have already fallen far behind their regional and national peers in funding their capital needs, and the average age of Massachusetts hospitals’ physical assets stretches beyond what is considered competitive or economically advantageous.

**TABLE 14: OPERATING AND TOTAL MARGINS 2008 & 2009**

	OPERATING MARGIN YEAR END 2009 (%)	OPERATING MARGIN YEAR END 2008 (%)	TOTAL MARGIN YEAR END 2009	TOTAL MARGIN YEAR END 2008
MEDIAN	2.0	0.7	2.1	0.9
75th PERCENTILE	4.7	2.7	4.5	3.7
25th PERCENTILE	0.3	-1.1	0.2	-1.1
WEIGHTED AVERAGE	2.7	2.2	2.4	2.3
% NEGATIVE	21 (n=13)	40 (n=25)	22 (n=14)	35 (n=22)
% DECLINING	28 (n=18)		30 (n=19)	

Based on 63 hospitals. Data as reported to DHCFP in quarterly financial filings.

MHA administered a survey of its members to gather data on the ways in which hospitals have taken steps to cut expenses, particularly in the difficult economic climate of the recent past. The following is just a sampling of the results that came in:

#### **Positions Eliminated**

- 1,226 full-time equivalent positions were eliminated during FY 2009 in response to cost pressures by 28 hospital respondents (representing about a quarter of all hospitals) to the MHA survey and another 475 positions were slated for elimination early in FY 2010. These 1,701 jobs included layoffs and budgeted but unfilled position reductions.
- For the 28 responding hospitals (representing about a quarter of all hospitals), the FY 2009 and FY 2010 position reductions represent 3.8% reduction in FTEs.
- To ameliorate the “pain” of layoffs, a few hospitals said they were offering early retirement packages to employees although the funds available for short-term pay-outs were limited.

#### **Cuts in Compensation and Benefits**

- Changes in compensation programs - no merit increases, no cost of living increases, no “step” increases other than those that are compulsory under union contracts.
- Pay reductions for senior management staff.
- “No Pay” policies for snow days. Overtime authorization practices now reflect “zero tolerance” sentiment among some reporting hospitals. Staff is being sent home on low volume days without advance notice.
- Health insurance benefit policies have been modified to increase employee proportionate contributions to both premiums and the cost of care.
- Annual meetings, holiday parties, service award celebrations and most other outside events have been cancelled and/or downsized significantly.
- Reductions have been made in employee education, including both attendance at work-related conferences and tuition reimbursement.

### **Impact on Services**

Sometimes, staff reductions can be scattered throughout the hospital and the workload is absorbed by others or compromises are made in the output expected. Enough staff reductions over a period of time, however, will ultimately result in the need to eliminate programs or services.

- One hospital respondent eliminated its outpatient behavioral health program and acknowledged that this put its inpatient psychiatric service at risk and that would be the next potential program excision.
- Similarly, another hospital reported consolidation of six health centers, closure of 35 inpatient psychiatric beds and elimination of adult addiction programs.
- Hours of operation have been reduced in outpatient areas, with the hope that the cost savings will outweigh any revenue reductions.

### **Other Measures**

Because hospital care is such a “high touch” product, most hospitals MHA heard from hoped to wring more income out of improved revenue cycle management processes and more savings out of non-wage, non-staff-related line items.

- Hospital respondents to the MHA survey indicated that they have re-established their group purchasing arrangement to refresh saving opportunities.
- Pressure on hospitals’ purchasing staff and supply chain managers has been intensified to produce better prices from all vendors - from those that deliver fresh produce to those who provide professional IT support.
- Several hospitals have been educating themselves and their staff members on process engineering discipline through Lean Six Sigma programs and improvement protocols. One hospital, however, indicated that the cost of acquiring expertise in engineered process improvement was not immediately affordable.
- Hospitals have reduced non-essential discretionary spending such as travel, conferences and food service at hospital meetings.

### **Outlook for 2010**

Words like “uncertain”, “challenging”, “bleak”, “tentative” and “daunting” permeated the responses MHA received to its questions regarding current financial worries and outlook. Still, nearly all respondents indicated that their commitment to community service programs, the highest quality of care and their charitable missions would be protected as they face what the future holds.

One of the most direct and sobering statements regarding future outlook came in the testimony that one hospital delivered to DHCFP and the Attorney General. This hospital “is trying to find a way to survive. Without reform that supports the important work that community hospitals...provide to our communities, the discussion will likely be a moot point since many of us will not be here in two to three years.”

## PART 5: CLOSING NOTES AND CONCLUSIONS

**There were a number of common themes in the inputs received from hospitals through their testimony and in other communications with MHA:**

- The law of averages does not work in shaping reform or in fixing the system. There is no “average” hospital and there is no “average” patient. One hospital pointed out that the DHCFP study looked critically at the “cost of teaching hospitals” to the payer community. This particular teaching hospital argues it is paid 25% to 70% less than its peers, but policy is being developed to divert patients away because it is a teaching hospital. Another hospital pointed out that the “10% of patients who account for 70% of costs” should be our first priority in resolving cost issues through quality and coordination of care.
- The conclusions that DHCFP reached by studying a limited number of commercial insurers’ medical claims experience can only begin to resolve the depth and persistence of problems that underfunded, under-paying public programs represent. Ironically, the DHCFP questionnaire for hospitals included a request for payment shortfall information by payer. Only eight of the 16 testifying hospitals had information systems and/or staff sufficient to prepare the analysis.
- The tremendous gains in coverage, access and cost that Massachusetts healthcare reform accomplished notwithstanding, there is still plenty of work to do. There are still patients who are using the emergency room for primary care. There are new forms of bad debt – but bad debt just the same. There are contractual allowances replacing bad debts with insufficient “new money” in the system. There are administrative costs for hospitals and the Commonwealth that may or may not be appropriate or affordable.

Both short term healthcare cost control proposals and long term payment reform proposals must be viewed through the prism of the cost of the resources used to provide care and all the pressures they represent system-wide if progress is to be made toward positive change without unintended consequences. For the hospitals in Massachusetts with negative operating margins, total revenues are insufficient to cover the cost of providing care. For all hospitals, about two thirds of the hospital “dollar” is spent on labor, representing thousands of jobs across the Commonwealth. Short term fixes such as arbitrary limits or caps on payments to providers without addressing the underlying value, structure and functioning of the delivery system can do irreparable harm and endanger meaningful payment and delivery reform in the long run.

**The Massachusetts Hospital Association has devoted substantial resources into the development of recommendations to help shape health insurance and payment reform in Massachusetts. The following publications are available on the MHA website ([www.mhalink.org](http://www.mhalink.org)):**

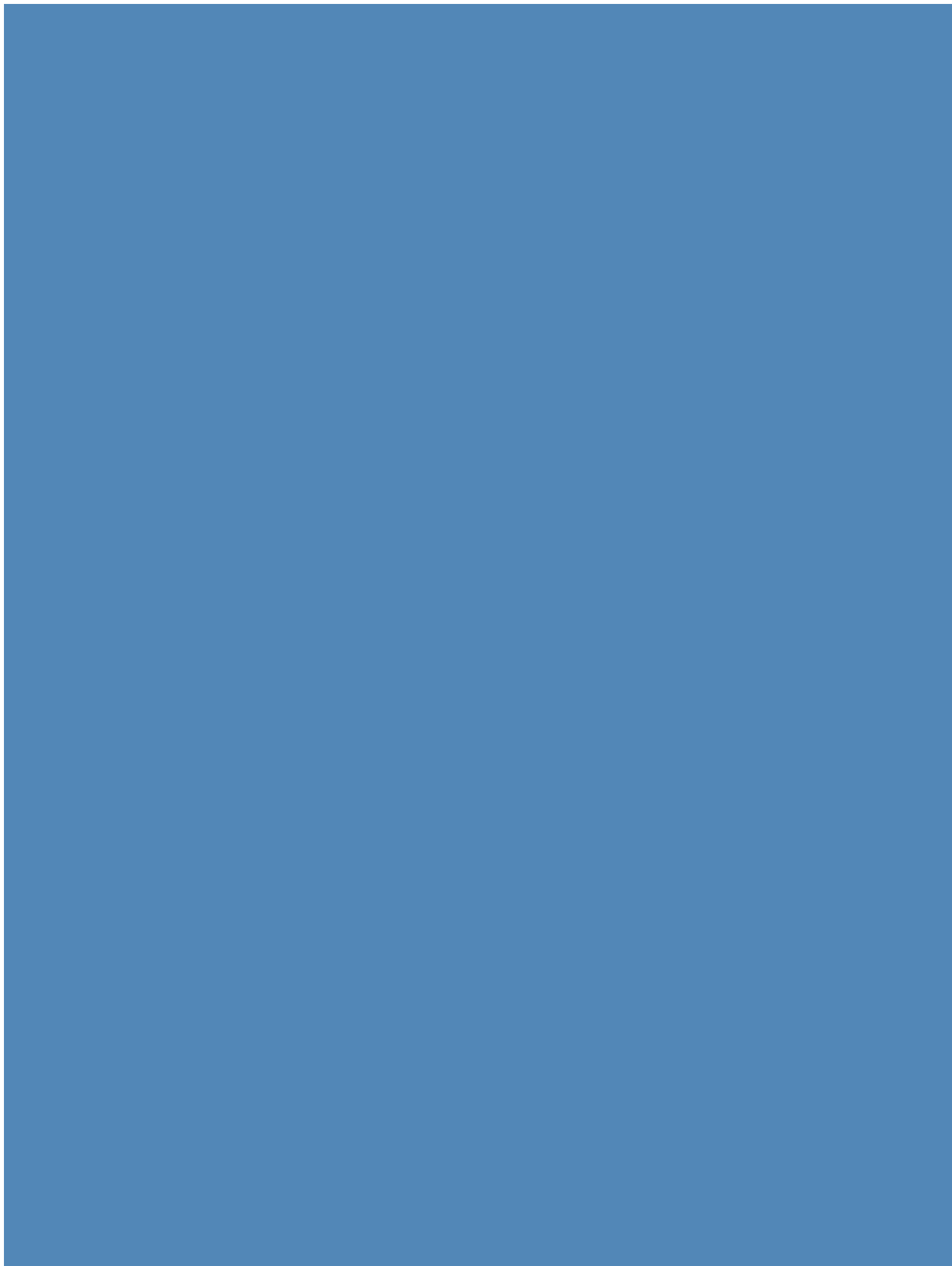
- “Massachusetts Payment Reform: An Overview of Critical Foundational Issues” and an executive summary providing an overview of issues related to payment reform including the formation of ACOs, the transfer of risk to providers, benefit design, oversight requirements, and how a new payment system will affect societal needs, such as medical education, uncompensated care and behavioral health.
- “Creating Accountable Care Organizations in Massachusetts: Key Issues for the Commonwealth to Address” and an executive summary which outlines goals and recommends strategies the state can adopt to facilitate successful formation and operation of ACOs.
- “Support for Societal needs: A Critical issue to Address in payment Reform” and an executive summary which examines five societal needs that hospitals and health systems fulfill and the importance of these efforts to the community and economy, and the potential impact of a global payment system on hospitals’ ability to continue to meet the needs. The paper also contains appendices that delve in depth into hospital financial issues relating to the Safety Net, Bad Debt and more, as well as a thorough discussion of Graduate Medical Education
- “Benefit Design and Beyond: Consumer Choice and the Role of Employers in Payment Reform” and an executive summary stating that the goals of improving affordability, efficiency and quality of care in the Commonwealth cannot be achieved without careful consideration of health insurance products and the benefit designs employers select, along with active consumer (patient) engagement. The report also makes specific recommendations to help guide employer decisions on health benefit design.

#### Endnotes

- i Medical expense ratio from DHCFP Massachusetts Health Care Cost Trends Part II; Distribution of Private Insurance Spending from Massachusetts Health Care Cost Trends Part III: Health Spending Trends for Privately Insured 2006 - 2008
- ii Massachusetts Health Care Cost Trends Part III: Health Spending Trends for Privately Insured 2006 - 2008, Page 7
- iii The hospital cost index: A new way to assess relative cost-efficiency; Cleverley, William O; Healthcare Financial Management  
Date: Monday, July 1 2002
- iv The Financial Health Of California Hospitals: A Looming Crisis; Mark G. Harrison and Cecilia C. Montalvo ; Health Affairs Volume 21;  
Jan./Feb. 2002
- v The Financial Health Of California Hospitals: A Looming Crisis; Mark G. Harrison and Cecilia C. Montalvo; Health Affairs Volume 21;  
Jan./Feb. 2002









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