

**2010**

**THE IMPACT OF MEDICAL EDUCATION  
ON THE STATE OF NEW YORK**

**amsny**

**The Associated Medical Schools of New York (AMSNY) is a consortium of the 15 public and private medical schools in New York State.** AMSNY works in partnership with its members to improve health care through education, advocacy and collaboration. AMSNY's focus areas include, but are not limited to: faculty development, diversity/inclusion of medical students and medical school faculty, and development of best practices around medical education, educational informatics, and global health. In addition, AMSNY works with its members to promote research initiatives that aim to improve health care outcomes.

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## EXECUTIVE SUMMARY

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New York is home to 15 medical schools and 82 affiliated teaching hospitals. One in every ten medical schools in the U.S. is located within the State. These institutions are major employers throughout New York and have a significant impact on the State's economy. Millions of New Yorkers rely heavily on the State's medical schools and teaching hospitals for quality medical care, education of health care professionals and research. In addition to countless social benefits, these institutions also provide substantial economic benefits to New York State.

### Key Facts about New York's Fifteen Medical Schools and Their Primary Hospital Affiliates

*All data from 2008 unless otherwise noted.*

- The **total economic impact** of New York's medical schools and their primary hospital affiliates on the State of New York is **more than \$85.6 billion**. \$1 in every \$13 in the New York economy is related to these institutions.
- New York's medical schools and their primary hospital affiliates **support nearly 694,000 full-time equivalent jobs** directly and indirectly throughout the State of New York. 1 in every 11 jobs in New York State is supported by these institutions. Nationally, this number is 1 in 46 jobs.
- Collectively, New York's medical schools and their primary hospital affiliates **generate nearly \$4.2 billion in taxes for the State of New York** through income, sales, corporate income and capital stock/franchise taxes. \$1 in every \$14 in taxes collected by the State is generated by these institutions.
- New York's medical schools and their primary hospital affiliates **generate over \$3.1 billion in tourism** by attracting out-of-state patients, visitors and conference attendees. They also **attract international dollars from outside of the U.S., in the areas of medical research and clinical expertise**.
- Research efforts at New York's medical schools and their primary hospital affiliates **generate \$7.45 billion for the State economy on an annual basis**.
- **For every dollar in Federal and State research funding** invested in New York's medical schools, New York State receives a **return of \$7.50**.

# INTRODUCTION

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In July 2009, the Associated Medical Schools of New York (AMSNY), a statewide consortium of New York’s public and private medical schools, retained the services of Tripp Umbach, a private research organization, to conduct a study on the economic, research, community and social benefits of the State’s academic medical centers (the fifteen medical schools and their primary hospital affiliates).<sup>i</sup> The purpose of this study is to measure and communicate the tremendous, multidimensional value that the academic medical centers bring to the State overall, as well as to the communities in which they are located.

## OBJECTIVES

This report measures:

- The direct and indirect economic impact stemming from the spending of New York State’s academic medical centers. They fall within the following categories:
  - Institutional expenditures for capital improvements, goods and services;
  - Spending by staff;
  - Spending by physicians;
  - Spending by medical residents;
  - Spending of medical and other health sciences students;
  - Spending by patients (external to the hospital);
  - Spending by visitors; and
  - Direct, first-round, expenditures re-circulate through the economy in successive rounds of re-spending. The end result is a multiplied economic impact that is a direct result of the academic medical center's presence and their spending patterns. For this statewide study the multiplier used is 2.3. This means that each dollar spent by these individual organizations fuels an additional spending of \$1.30 in the State by other organizations.
  
- The direct and indirect employment impact generated from operations of New York State’s academic medical centers includes individuals who work directly for these institutions. Indirect employment is the additional jobs created as a result of the institution’s economic impact. Local companies that provide goods and services to an institution increase their number of employees as purchasing increases thus creating an employment multiplier. In this study the employment multiplier used is 1.8.
  
- The tax revenue impact of New York State’s academic medical centers including income, sales, corporate income and capital stock/franchise taxes.

# ECONOMIC IMPACT

Nationwide, academic medical centers contributed over \$500 billion to the U.S. economy in 2008, approximately 3.6% of the total U.S. economy. Nearly 14% of the total economic impact of all American academic medical centers is attributed to the operations of the New York State institutions, as measured by the Association of American Medical Colleges (AAMC).<sup>ii</sup>

Figure 1: Total Economic Impact (Direct and Indirect) Attributable To Each State’s Academic Medical Center Operations as Calculated by the AAMC, 2008, in billions<sup>iii</sup>



(Figure 1 reflects the economic impact of AAMC-member institutions: the \$69.4 billion impact for New York only includes the twelve NYS allopathic medical schools, and their primary hospital affiliates. AMSNY's economic impact report includes all fifteen NYS medical schools and their primary hospital affiliates.)

New York's academic medical centers had a **combined State economic impact of over \$85.6 billion**, which accounts for 8% of the State's economy. **One in every 13 dollars in the New York economy is related to the operations of these entities.**

This economic impact is comprised of \$37.2 billion in direct business volume impact and a further \$48.4 billion in indirect economic impact accruing to the economy through the multiplier.<sup>iv</sup>

Figure 2: Total Economic Impact<sup>v</sup> of Medical Education on the State of New York, 2008

Total Economic Impact (including multiplier)	\$85.6 billion
Direct Economic Impact	\$37.2 billion
In-State Spending:	
On Capital/Goods and Services	\$21.1 billion
By Staff (non-physicians)	\$9.3 billion
By Physicians	\$2.4 billion
By Students and Residents	\$1.3 billion
By Patients	\$286.9 million
By Patient Visitors	\$416.9 million
By Out-of-State Visitors	\$2.4 billion
Indirect Economic Impact	\$48.4 billion

## **DIRECT ECONOMIC IMPACT**

### **Capital/goods and services**

New York’s academic medical centers generate \$21.1 billion in direct spending on capital improvements, as well as the purchase of goods and services. Spending is generated from capital equipment purchases made with New York State vendors and contractors (an average of spending over the previous five years). Spending is also generated from the purchase of goods, services and supplies from in-state vendors. This includes a broad range of purchases such as laundry services, food and beverage supplies, drugs, medical disposables and computer consulting.

### **Spending by staff**

While the academic medical center’s spending on goods and services is substantial, one of the biggest benefits to the economy comes from their direct payroll. New York State’s academic medical centers have a combined payroll and benefits obligation to staff, including administrators, nurses, aides, etc., of over \$9.3 billion, the majority of which goes to New York residents, who spend the vast majority of their disposable income within the State of New York.

### **Spending by physicians**

As with payroll to staff, pay provided to physicians directly employed by the academic medical centers has a substantial impact on the economy. The total physician payroll generates nearly \$2.4 billion in direct impact through employed physician spending in the State.

### **Spending by residents, medical and health sciences students**

The spending by residents and students for housing, food, supplies, entertainment and other goods and services comprises their direct impact on the New York economy. As institutions of excellence in research, medical and health sciences education, New York's academic medical centers attract many students from outside of the State. Out-of-state medical students, who remain in New York after graduation to complete their residency, represent the best return on investment. In 2008, student and resident spending amounted to nearly \$1.3 billion. It should be noted that it is only these out-of-state students whose impact is included in the study, since they bring with them a fresh influx of dollars to the New York economy.

### **Spending, outside of the medical school and teaching hospitals, by patients from out-of-state**

Spending by patients for medical services is not included in the direct impact. Only the spending by patients outside of the State's academic medical centers is included. On this basis, out-of-state patient spending has an impact of \$286.9 million on New York business volume annually. As noted, actual out-of-state patient spending is substantially higher than this, but is already accounted for in the above cited medical center spending.

### **Spending by visitors of out-of-state patients**

Medical centers are significant visitor destinations. Visitors come to see patients who are friends and family, and when they are from out-of-state, they bring with them new dollars to the New York economy. These visitors inject money into the New York economy with spending on accommodations, gifts, services and other items during their stay. In 2008, out-of-state patient visitors contributed \$416.9 million to the New York economy.

### **Spending by conferences and meetings visitors**

Academic medical centers are important sponsors of meetings, seminars and symposiums in New York State. These events draw significant numbers of out-of-state delegates, who like attendees to other conferences and trade-shows in the State, provide a major boost to the economy through their fresh influx of dollars. In 2008, visitors for meetings and conferences spent \$2.4 billion.

### **Business Impacts**

In addition to the annual, recurring impacts of the previously outlined spending categories, other businesses in the State have invested heavily to support the business volume generated by the academic medical centers. Tripp Umbach's impact model calculates the two principal components of business investments: real estate development and business inventories committed to academic medical center-related business.

New York businesses have invested nearly \$12.7 billion in real estate property developments to support their business with the academic medical centers. Business inventories in the State allocable to academic medical center-related business volume are calculated to be over \$10.6 billion.

## **REGIONAL ECONOMIC IMPACT BREAKDOWN**

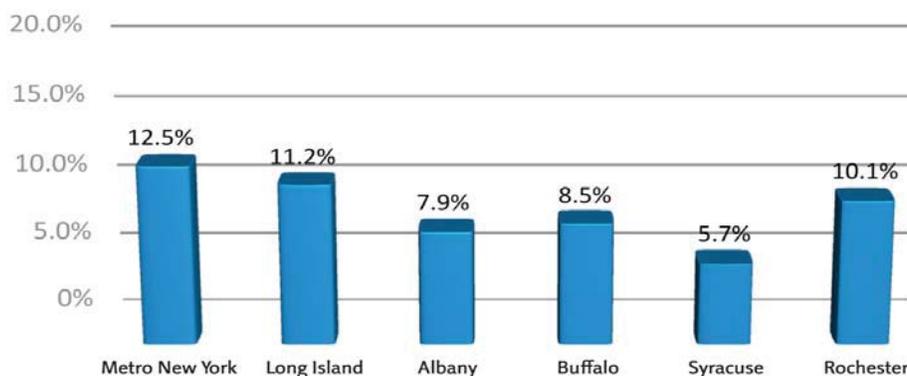
The economic impact of New York State’s academic medical centers is presented in this report at three separate geographic levels: New York State, Downstate Region and Upstate Region<sup>vi</sup> (See Figure 3).

Figure 3: Economic Impact, 2008  
Regional Breakdown



These economic impacts run statewide but are more locally seen and felt in the areas directly surrounding the academic medical centers. At the State level, academic medical centers are responsible for nearly 8% of the economy; however, within some of the local geographies<sup>vii</sup> the industry supports as much as 12.5 % of the economy, or one in every 8 dollars (see Figure 4).

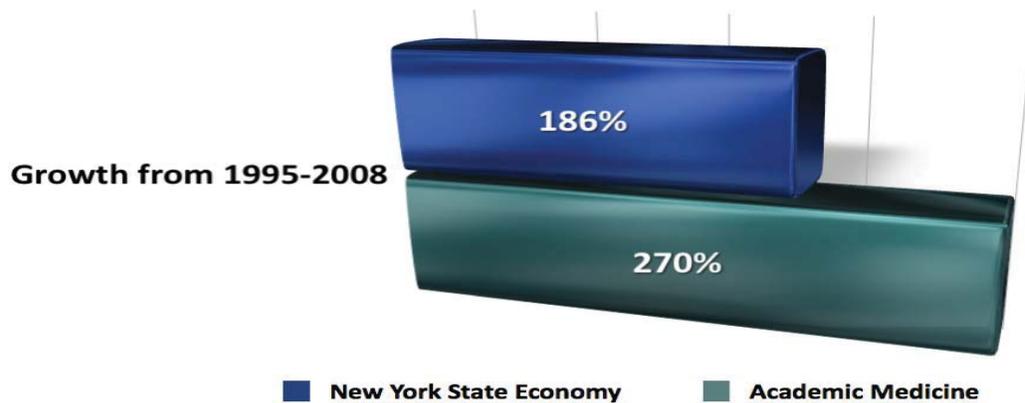
Figure 4: Percentage of The Local Economy Attributable To Academic Medical Centers, 2008



## **GROWTH OF THE NEW YORK STATE ECONOMY AND ACADEMIC MEDICINE**

In 1995, the estimated total economic impact of the New York State academic medical centers was \$32 billion or approximately 5% of the State's economy. Between 1995 and 2008, the economic impact of these institutions grew by 270%, while the overall New York State economy grew by only 186%. Therefore, the impact of New York's academic medical centers has grown faster than the overall New York economy in this fourteen-year period.

Figure 5: Academic Medicine in New York State Outpaces the State's Economy 1995-2008



# EMPLOYMENT IMPACT

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New York State leads the nation in total employment by academic medical centers. The employment impact is four times greater in New York State than the rest of the nation – with a ratio of **one in every 11 jobs statewide** attributable to academic medical centers. Nationwide,

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*Between March 2009 and March 2010 more than 29,000 jobs were created statewide in the education and healthcare sectors. New York’s medical schools and teaching hospitals are important anchors of this growing sector of the state’s economy. While 29,000 jobs were added in education and healthcare, the state lost more than 100,000 jobs, including the loss of 30,000 manufacturing jobs, 25,000 construction jobs, and nearly 24,000 jobs in financial services.*

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this figure is one in every 46 jobs.<sup>viii</sup> More than half of all new jobs projected by 2016 are expected to be in the education and healthcare sectors. Between 2006 and 2016, this amounts to more than 300,000 jobs in education and healthcare, an industry cluster anchored by New York’s academic medical centers. Investments in these institutions will have significant pay-offs in terms of sustainable quality job creation.<sup>ix</sup>

In 2008, New York State’s academic medical centers directly employed more than 385,000 New York residents. However, their total impact on statewide and regional employment is far greater. The business volume generated by the academic medical centers creates jobs in a broad range of sectors throughout the State; at hotels, restaurants, construction firms, laundry and cleaning services and professional service companies. These jobs are proportionate to the internal service needs of the academic medical centers and their related populations (staff, physicians, students, etc.). In addition, state and local tax revenues generated by academic medical centers and their business volume create government employment opportunities.

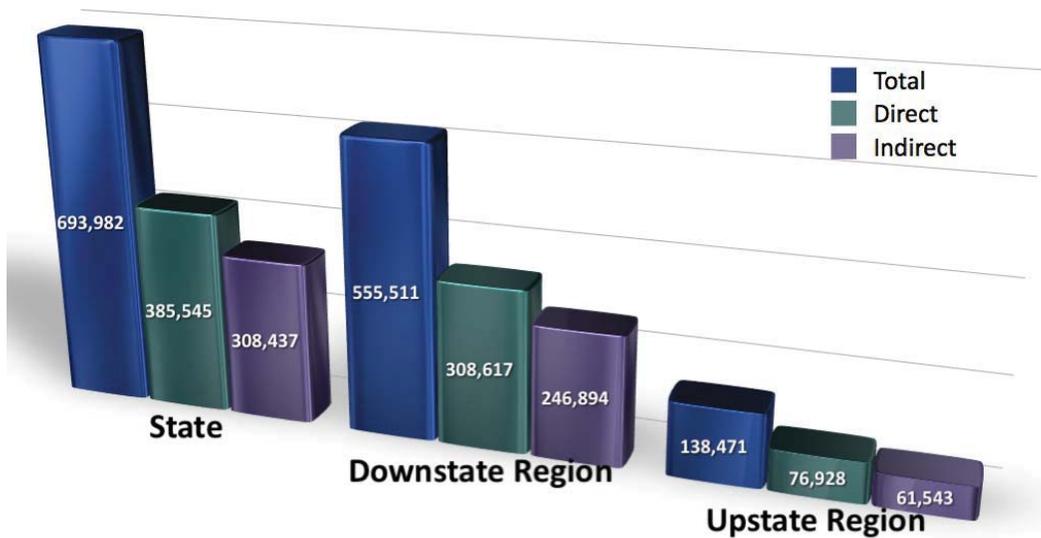
Figure 6: Total Employment (Direct and Indirect), 2008

Total Employment	693,982
Direct Employment at NYS Academic Medical Centers	385,545
Indirect Jobs Supported Statewide	308,437

## REGIONAL EMPLOYMENT IMPACT BREAKDOWN

Regionally, New York’s academic medical centers are major employers in their local communities. For every person directly employed at one of the member medical schools or their primary hospital affiliates, approximately one additional FTE is supported within the State’s economy. **Therefore, nearly 694,000 FTEs (direct and indirect) in New York, which includes approximately 556,000 FTEs in the Downstate Region and over 138,000 FTEs in the Upstate Region, are attributable to the operations of New York’s academic medical centers.**

Figure 7: Employment Impact, 2008  
Regional Breakdown



The impacts are seen not only at the State level, but more directly at the local level where the concentration of jobs directly attributable to the academic medical centers is strongest. Below is a chart showing the percentage of employment in the areas directly surrounding the medical schools which is attributable to the academic medical centers.

Figure 8: Percentage of The Local Employment Attributable to Academic Medical Centers, 2008

